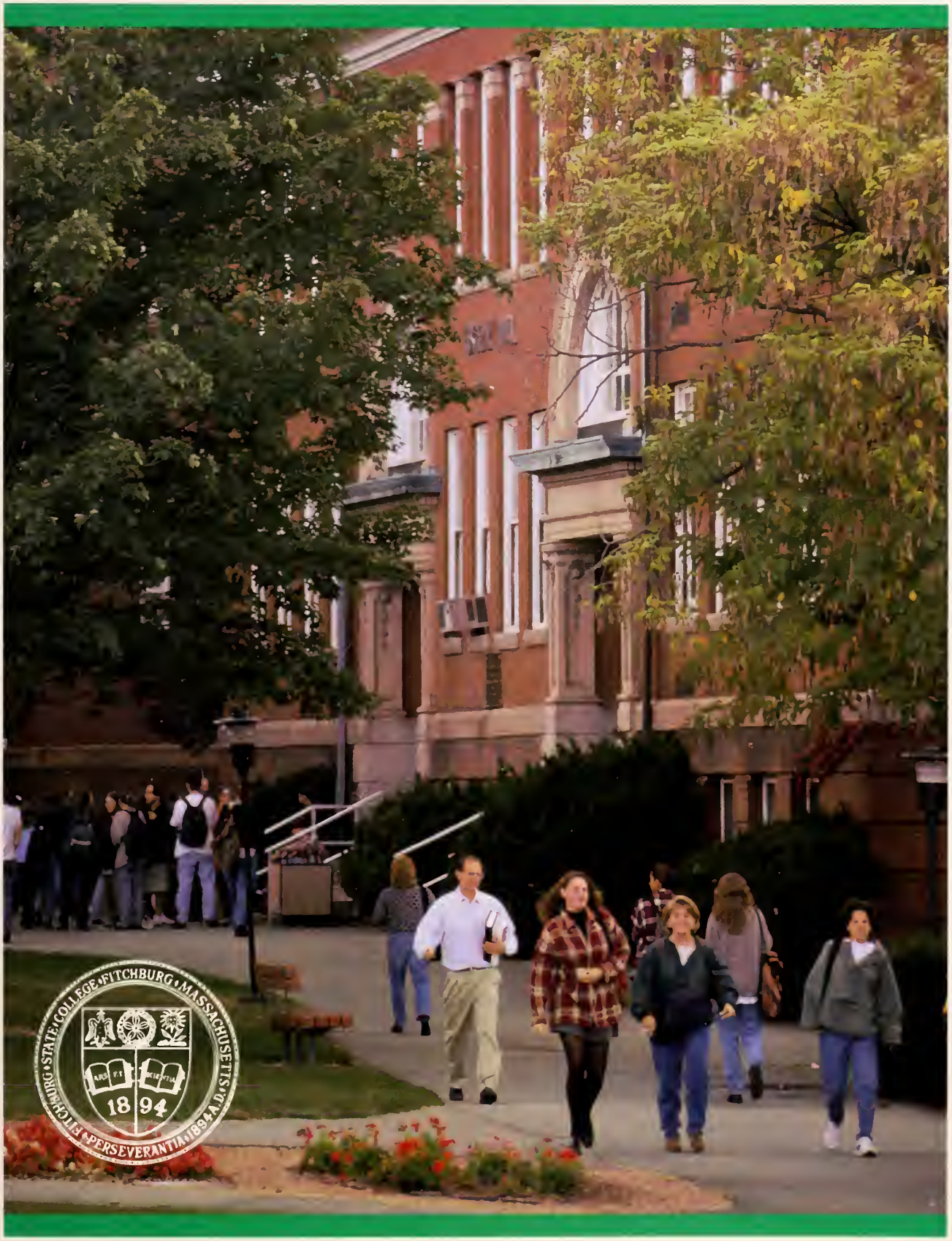
Fitchburg State College

Undergraduate & Graduate Course Catalog 1998–1999



Fitchburg State College

Undergraduate & Graduate Course Catalog

1998–1999

To the College Community

On behalf of the college community, it is my pleasure to welcome you to Fitchburg State—"The Leadership College." For more than a century, this institution has provided high quality educational opportunities to the people of the Commonwealth. Today, the college is a comprehensive public institution with a long history of growth and a clear record of accomplishment.

Several recent initiatives continue that tradition: the new Leadership Academy and related campus-wide programs, an extensive merit scholarship program, a guarantee to employers, and one of the few structured three-year bachelor's degree programs. An extensive $2.75 million computer upgrade now links the entire campus, and a $12 million recreation center will soon be under construction.

More important than any program or project, however, is our central academic mission, and it is of that that we are most proud. Our teaching faculty is deeply involved in the success of our students, and committed to learning in its broadest sense. They are dedicated to general as well as specialized knowledge in their fields, to ongoing professional development, and to maintaining a link between the worlds of scholarship and practical experience.

All of us on campus are honored to play a role in creating the kind of supportive environment that fosters growth and discovery, which lie at the heart of the learning experience.

Michael P. Riccards
President

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About the College

History of the College

Established in 1894 by an act of the Massachusetts Legislature, the State Normal School in Fitchburg opened in temporary quarters in the old high school building on Academy Street. Principal John G. Thompson, aided by a teaching staff of three, implemented a two-year teacher training program for women that had forty-six participants. In December 1896, the school expanded into a new building, known as Thompson Hall, and set up the State Schools of Observation and Practice in city buildings on Day Street and Highland Avenue.

In the next decade the school was a trendsetter for programs in Education. The Edgerly School opened, originally as an eighth-grade model and practice school, and then in 1910, it became one of the first junior high schools in the United States. The following year the school initiated the first practical arts teacher training course in the country for men.

In 1930, the State Normal School was authorized to offer a bachelor's degree in practical arts, and in 1932, when it became the State Teachers College at Fitchburg, four-year degrees were offered in all areas of education.

Under the auspices of the State Division of University Extension summer courses were first offered in 1915, marking the beginning of the college's commitment to Continuing Education programs. In 1935, the college was also authorized to establish graduate programs and in 1954 the first evening courses were offered.

In 1960, the college changed its name and expanded its mission. The State College at Fitchburg diversified its programs to include degrees in disciplines other than education. In 1965, its name was officially changed to Fitchburg State College, which today offers forty-nine undergraduate degree programs in eighteen academic departments, twenty Master's Degree programs, five Certificate of Advanced Graduate Study programs, and seven Graduate Certificate programs. Enrollment is up to 2,800 full-time and 5,000 part-time students which include 1,100 matriculated graduate students. The campus has expanded from a single structure on High Street to thirty-two buildings on ninety acres, becoming the educational center for the Montachusett region. The college proudly offers traditional and non-traditional programs to serve the educational needs of its students as undergraduate, graduate, and continuing education students.

Mission

Fitchburg State College is an institution of higher education that integrates an interdisciplinary, multicultural Liberal Arts and Sciences core program with selected, strong professional and arts and sciences majors. Our unique educational milieu encourages development of the whole person and prepares students for careers that meet the needs of their varied communities.

This comprehensive public college is committed to providing excellent, yet accessible, and affordable life-long learning opportunities in undergraduate, graduate, and continuing education. A dynamic force in New England, Fitchburg State College shares leadership and resources with and draws expertise from the Montachusett region. Valuing the diversity of the learning community, we help students become personally and professionally responsible citizens by promoting their intellectual, social, and ethical development.

Fitchburg State College's mission is that of an uncommon public college that strives to:

- Integrate high-quality professional programs with strong liberal arts and sciences studies
- Promote, facilitate, and model self-reliant learning within a cooperative framework
- Stress high standards of academic, professional, and societal performance
- Provide opportunities for social and academic success to enhance self-esteem
- Foster excellence in teaching, service, and research
- Provide library resources and services necessary to support the current and anticipated academic needs of the college
- Promote an atmosphere of collegiality, openness to ideas, and esprit de corps
- Support faculty and administrators with professional development opportunities
- Respond in an affirmative and creative manner to the changing character of society
- Develop a global perspective through international exchanges and programs
- Meet social, economic, technological, and environmental changes
- Support racial, cultural, and ethnic diversity in the college community
- Maintain a healthy, safe, and aesthetic living and learning environment sensitive to local and global concerns

Fitchburg State College seeks to achieve its mission through:

Mutually supportive strong Liberal Arts and Sciences professional majors:

- Offering a liberal foundation that encourages multicultural and interdisciplinary courses
- Focusing on modes of inquiry within each discipline to strengthen critical thinking skills
- Providing extensive field experiences that bring together theory and practice
- Integrating technological development across the curriculum
- Educating students for participation in the world community at both the undergraduate and graduate level through academic and experiential opportunities
- Supporting undergraduate majors that complement graduate programs that, in turn, build on the strengths of the undergraduate offerings

A student-centered environment:

- Emphasizing creative teaching and active learning
- Providing learning experiences where students come together to challenge one another's ideas in an environment of mutual respect
- Responding to the intellectual, cultural, social, physical, and recreational needs of the residential and commuting populations
- Providing support for students, including an academic advising center, computer facilities, a freshmen readiness program, developmental skills and ESL programs, peer advising, tutorials, counseling, as well as health services
- Offering appropriate services for students with physical and learning disabilities

Commitment to the welfare of the larger community and region that it serves with:

- Collaborative efforts with school districts, the health care community, social service agencies, the business community, and higher educational institutions, particularly community colleges
- Programs for disadvantaged and gifted students, both outreach and on-campus
- Cultural events and activities that enrich the life of the community
- Faculty, administration, and student participation in community programs
- Tuition and fees that are within reach of people with moderate economic means

Undergraduate Day School Academic Calendar 1998–1999

Fall 1998

September

6	Sunday	Residence halls open for all new students 12 noon
7	Monday	Residence halls open for all students
8	Tuesday	President's address to faculty 10:00 am followed by department meetings and student advising Freshman Convocation 1:30 pm
9	Wednesday	Classes begin 8:30 am
15	Tuesday	Final day to drop a course
16	Wednesday	Final day to add a course
23	Wednesday	All College Development Day—NO CLASSES

October

8	Thursday	U.S. and Mass. Constitution Examination
9	Friday	Final day for making up Incomplete Grades from previous semester
12	Monday	Columbus Day—NO CLASSES

November

4	Wednesday	Final day for withdrawal from classes without penalty
11	Wednesday	Veterans' Day—NO CLASSES
12	Thursday	U.S. and Mass. Constitution Examination
25	Wednesday	Thanksgiving recess begins 3:30 pm
29	Sunday	Thanksgiving recess ends

December

11	Friday	Last day of Fall Semester classes
14–21		Final Semester Examinations

Spring 1999

January

18	Monday	Martin Luther King Day—NO CLASSES
19	Tuesday	College opens Residence halls open for all students 8:30 am Departmental meetings and student advising
20	Wednesday	Classes begin 8:30 am
26	Tuesday	Final day to drop a course
27	Wednesday	Final day to add a course

February

15	Monday	U.S. Presidents' Day—NO CLASSES
18	Thursday	U.S. and Mass. Constitution Examination
19	Friday	Final day for making up Incomplete Grades from the previous semester

March

12	Friday	Spring vacation begins 4:30 pm
21	Sunday	Spring vacation ends
24	Wednesday	Final day for withdrawal from classes without penalty

April

19	Monday	Patriots' Day—NO CLASSES
22	Thursday	Honors Convocation afternoon classes suspended 1:30 pm

May

7	Friday	Last day of Spring Semester classes
10–17		Final Semester Examinations
29	Saturday	Commencement 10:00 am—Campus Quadrangle

Calendar Subject to Change

Graduate and Continuing Education Academic Calendar 1998–1999

Fall 1998

July

13–31	Walk-in/Mail-in/Phone-in/Fax-in Registration for 1998 Fall Semester Sanders Administration Building 9:00 am–7:00 pm Mon.–Thurs. 9:00 am–4:00 pm Fri. To register by phone, call 508-665-3181 (MasterCard and VISA ONLY. Charge must be over $50.00) Fax number is 978-665-3658

August

1–26	Registration (cont.)
27–31	Late Registration. Registrations and course changes accepted prior to the second class meeting. (Class meeting defined as 2.5 hours)

September

1–22	Late Registration (cont.)
9	First day of classes

October

9	Final date for making up Incomplete Grades from previous semester. (spring and summer 1998)
12	Columbus Day—NO CLASSES

November

11	Veteran's Day—NO CLASSES
16–14	Registration for winter session
25–29	Thanksgiving Holiday—NO CLASSES

December

Nov 30–Dec. 3	Graduate Students meet with Advisor for 1999 spring course approvals. (Degree candidates and applicants only.)
22	Last day of fall semester classes

Winter Session 1998–1999

November

16–31	Registration for winter session

December

1–14	Registration (cont.)
15–28	Late registration for winter Session
28	Winter session begins

Spring 1999

December

Nov. 30–Dec. 3	Graduate students meet with Advisors for 1998 Spring course approvals (Degree candidates and applicants only.) Spring pre-registration (graduate students only.)
7–31	Walk-in/Mail-in/Phone-in/Fax-in Registration for 1999 spring semester Sanders Administration Building 9:00 am–7:00 pm Mon.–Thurs. 9:00 am–4:00 pm Fri.

January

1–6	Registration (cont.)
Jan. 7–Feb. 2	Late Registration. Registrations and course changes accepted prior to the second class meeting. (Class meeting defined as 2.5 hours)
18	Martin Luther King Day—NO CLASSES
20	First day of classes

February

1–2	Late Registration (cont.)
15	U.S. President's Day—NO CLASSES
15–21	Vacation for off-campus sites only
19	Final day for making up Incomplete Grades from previous semester. (fall 1998)

March

15–25	Spring vacation—on-campus courses
29–Apr. 2	Period for making appointments with advisors for summer 1999 and fall 1999 course approvals (Students in Master's degree and CAGS programs only.)

April

12–15	Graduate students meet with Advisors for 1999 summer and fall course approvals (Degree candidates and applicants only.)
19	Patriot's Day—NO CLASSES
19–25	Vacation period—off-campus sites ONLY

May

11	Last day of spring semester classes.
29	Commencement 10:00 am—Campus Quadrangle

Calendar Subject to Change

Graduate and Continuing Education Summer Session 1998

Summer Session I-May 26-June 29

April

20–30	Walk-in/Mail-in/Phone-in/Fax-in Registration for 1998 summer sessions I and II are accepted. Sanders Administration Building, 9:00 am–7:00 pm Mon.–Thurs.; 9:00 am–4:00 pm Fri. To register by phone, call 508-665-3181 (MasterCard and VISA ONLY. Charge must be over $50.00) Fax number is 508-665-3658.

May

1–11	Registration (cont.)
11	Late Registration for summer session I. Registrations and course changes accepted prior to the second class meeting. (Class meeting defined as 2.5 hours)
26	First day of classes for summer session I.

June

28	Final day of classes for summer session I.

Summer Session II-July 6-August 7

April

20–30	Walk-in/Mail-in/Phone-in/Fax-in Registration for 1998 summer sessions I and II are accepted. Sanders Administration Building, 9:00 am–7:00 pm Mon–Thurs.; 9:00 am–4:00 pm Fri. To register by phone, call 508-665-3181 (MasterCard and VISA ONLY. Charge must be over $50.00) Fax number is 978-665-3658.

June

1–22	Registration (cont.)
23	Late Registration summer session I. Registrations and course changes accepted prior to the second class meeting. (Class meeting defined as 2.5 hours)

July

6	First day of classes for summer session II

Aug.

7	Final day of classes for summer session II.

Calendar Subject to Change

Our Commitment to You

The Fitchburg State Guarantee

Fitchburg State guarantees that its graduates will be prepared to meet the standards of the careers for which they have been educated. If within three years of a student's graduation from the college an employer determines that the graduate is not sufficiently or properly educated to those standards, the college will provide the necessary course or courses at no cost.

"The Fitchburg State community is able to extend this assurance to employers because the college stands by the academic quality of its programs and the preparation of its graduates. We are proud of our students and confident that they are, indeed, competitive at the very highest national and international levels. Our faculty members often seek the advice of practitioners when designing their programs, and have established an extensive system of practica and internships that give students on-the-job experience before they graduate. The faculty know their students and understand their commitment to mastering professional standards of excellence."

—President Michael P. Riccards

Institutional Accreditations, Approvals, Memberships, and Affiliations

Accredited By

Fitchburg State College is accredited by the New England Association of Schools and Colleges, Inc.; the National League for Nursing Accrediting Commission; the Council for Standards in Human Service Education; the National Accrediting Agency for Clinical Laboratory Sciences; and the National Council for Accreditation of Teacher Education.

The New England Association of Schools and Colleges is a non-governmental, nationally recognized organization whose affiliated institutions include elementary schools through collegiate institutions offering postgraduate instruction.

Accreditation by the New England Association assures that the institution:

- Meets or exceeds criteria for the assessment of institutional quality periodically applied through a peer group review process
- Maintains the necessary resources to achieve its stated purposes through appropriate educational programs and gives reasonable evidence that it will continue to do so in the foreseeable future
- Maintains its demonstrated institutional integrity

Inquiries regarding the status of an institution's accreditation by the New England Association should be directed to the administrative staff at the college or to the Association at:

Commission on Higher Education
New England Association of Schools and Colleges
The Sanborn House, 15 High Street
Winchester, Massachusetts 01890
617-729-6762

Addresses for other accrediting agencies include:

National League for Nursing Accreditation Commission
350 Hudson Street
New York, New York 10014
212-989-9393

Approved by

- The National Association of State Directors of Teacher Education and Certification
- The Interstate Certification Compact in Certification of Educational Personnel
- The State Board of Registration in Nursing

Member of

- The American Association of Colleges of Teacher Education
- The College Entrance Examination Board
- The Massachusetts Association of Colleges of Nursing, the National League for Nursing Council of Baccalaureate and Higher Degree Programs, and the Massachusetts and Rhode Island League for Nursing
- The American Association of State Colleges and Universities and the International Association of Colleges and Universities
- The American Council on Education
- The New England Association of College Admissions Counselors and the American Association of Collegiate Registrars and Admissions Officers
- The Council of Colleges of Arts and Sciences and the Council of Graduate Schools
- The North American Association of Summer Sessions
- American Assembly of Collegiate Schools of Business and the Association of Collegiate Business Schools and Programs
- American Academy for Liberal Education

Merrimack Education Center

The Merrimack Education Center, located in Chelmsford, Massachusetts, is an educational collaborative serving 22 school districts with 100,000 students and 6,000 teachers and administrators. MEC programs are designed to:

- Meet changing educational priorities
- Support educational reform
- Provide teacher recertification opportunities
- Provide educational services, cooperation, and innovation

The Fitchburg State College Division of Graduate and Continuing Education collaborates with MEC's Office of Staff Development to offer courses for credit. Each year more than 1,000 MEC educators participate, and approximately 40 earn degrees and certificates including:

- Master of Education in Elementary and Secondary Field
- Certificate and Certificate of Advanced Graduate Studies (CAGS)

The Merrimack Education Center Curriculum Council, consisting of participating school systems and Fitchburg State College faculty and administration, supervise the quality and content of FSC/MEC course offerings and programs. Established by Title III funds, MEC continues through the support of its membership.

Rollins Griffith Teacher Center and the Center for Media Technology of the Boston Public School System

In collaboration with the Rollins Griffith Teacher Center and the Center for Media Technology of the Boston Public School System, Fitchburg State College offers a Master of Science Degree Program in Communications Media/Instructional Technology. The objectives of the program are to:

- Equip teachers and interested professionals with the knowledge and skills necessary for the effective development and management of media technology in school settings
- Update teachers' technological skills with innovative and up-to-date curricula and courses
- Build on teachers' curriculum-based knowledge and equip them with skills for presenting information to students with creative methodologies
- Make teachers familiar and comfortable with media technology so they can easily incorporate it into their classroom curricula

Dr. Elena Kyle, Graduate Program Chair of the Communications Media Department and the Graduate Curriculum Committee work in close collaboration with Dr. Nancy Jones of the Rollins Griffith Teacher Center and the Center for Media Technology to administer and implement this program.

A Bachelor of Science in Education leading to provisional certification with advanced standing (initial) in elementary education is also offered in collaboration with FSC Education faculty. The program takes place on campus and on location for Boston Public School paraprofessionals. Dr. Ronald Colbert, Chair of the Education Department, serves as advisor for this program.

Ramakrishna Paramahamsa Educational Society and Fitchburg State College: A Joint Venture

The Ramakrishna Paramahamsa Educational Society is an organization devoted to the delivery of academic and professional development programs to students in Hyderabad, India who have completed a Bachelor's degree. Founded in 1987, the Society launched its first educational venture by establishing the Vivekananda School of Post Graduate Studies. The Ramakrishna Paramahamsa Educational Society offers many programs that are affiliated with Osmania University, the largest university in the state of Andhra Pradesh in India.

Fitchburg State College and the Ramakrishna Paramahamsa Educational Society have agreed to offer collaboratively a Master of Business Administration (MBA), a M.S. in Computer Science to the citizens of Hyderabad, India.

The two programs are unique in the flexibility they offer students. After one year of taking foundation courses for master's level study, students have the option of taking their graduate courses in the United States at Fitchburg State College or continuing at the Vivekananda School of Post Graduate Studies in Hyderbad, India, in a program offered collaboratively with Fitchburg State College. Upon successful completion, students will be awarded a graduate degree by Fitchburg State College.

Further information may be obtained from the Coordinator, Extended Instruction Programs at 978-665-4122 or from:

Vivekananda School of Post Graduate Studies
Sringar Colony Road
Punjagutta, Hyderabad - 500 873 INDIA
Phone: 091-040-3744908

Servicemembers Opportunity College

Fitchburg State College is a fully-approved SOC member. The SOC principles and criteria subscribed to by all member institutions provide the basis for a consistent and uniform approach to meeting the educational goals and special needs of military personnel. The Associate Registrar serves as the counselor for this important program.

Disclosure of Completion and Graduation Rates

- Effective July 1, 1996 all schools are required to calculate and disclose a completion or graduation rate and a transfer-out for the general student population
- Specific provisions are found in Sections 668.41 and 668.46 of the general provisions
- Regulations require schools to disseminate completion or graduation rate information to all current students, and upon request, to any prospective student
- However, according to section 485(a)(3)(A) of the Higher Education Act of 1965, schools must make completion or graduation rate information for the general student population available to current and prospective students prior to the student enrolling or entering into any financial obligation
- This financial obligation begins when an enrollment or tuition deposit is made by the student
- In order to make completion or graduation rate information available to prospective students before they enter into a financial obligation, schools might consider the viewbook or other materials that accompany an offer of admission
- To make the information available to current students before they enter into a financial obligation, schools might consider publications such as billing statements or registration materials

Collegewide Policies

Affirmative Action Policy

It is the policy and commitment of Fitchburg State College not to discriminate on the basis of race, religion, color, age, gender, sexual orientation, disability, veteran status, marital status, or national origin in its educational programs, activities, admissions, or employment policies, and to comply with the requirements of Federal Executive Orders 11246 and 11375 as amended; the Civil Rights Act of 1964 as amended; Title IX of the Educational Act of 1972; Sections 503 and 504 of the Rehabilitation Act of 1973; Section 402, Vietnam Era Veterans Readjustment Assistance Act of 1974; the Civil Rights Restoration Act of 1988; Americans with Disabilities Act of 1990; the Civil Rights Act of 1991; and pertinent laws, regulations, and Executive Orders, directives of the Board of Higher Education of the Commonwealth of Mass., the Commonwealth of Massachusetts, and other applicable state and federal statutes.

Inquiries concerning the application of, or compliance with, the laws and regulations prohibiting such discrimination should be addressed to:

- Mary E. Scott at 978-665-3172
  Director of Human Resources/Affirmative Action
  and designated Title IX Coordinator; or
- Steven J. Lanciani at 978-665-3118
  Vice President for Facilities Management
  and designated Coordinator for Section 504
  and the Americans with Disabilities Act; or
- Office of the Assistant Secretary of Civil Rights,
  United States Department of Education, Washington, D.C.

Sexual Harassment Policy

It is against the policy of Fitchburg State College for any member of the college community, male or female, to sexually harass another employee or student. The college is committed to providing a working, living, and learning environment that is free from all forms of abusive, harassing, or coercive conduct. This policy seeks to protect the rights of all members of the College Community (faculty, librarians, administrators, staff, and students) to be treated with respect and dignity.

Sexual harassment consists of unsolicited verbal, non-verbal, and/or physical conduct, which has the effect of interfering with student or employment status or of creating an intimidating, hostile, or offensive environment. The college's Affirmative Action Grievance Procedures will serve as a system of review and resolution for both formal and informal complaints. Further information or advice may be obtained by contacting Mary E. Scott, Director of Human Resources/ Affirmative Action at 978-665-3172.

Privacy and Confidentiality Regulations

A Fair Information Practices Act (FIPA) administrator directs the Privacy and Confidentiality Regulations. Copies of the regulations as part of FIPA Chapter 766 (of the Acts of 1965) are posted on bulletin boards at the college and kept on file at the Registrar's Office.

Students should note that if any of these regulations should conflict with applicable provisions of the Federal Privacy Act of 1974 as amended, or with any regulations promulgated pursuant to said act, the provisions of said federal act or federal regulations shall control.

Human Studies Policy

The college has established a Human Studies Policy and Committee, which reviews and approves the adequacy of protection provided for human subjects serving as research subjects. The college is cognizant of its responsibility to protect the privacy, safety, health, and welfare of such subjects. A copy of this policy may be obtained in the Office of Academic Affairs.

Drug-Free Environment

Fitchburg State College is in compliance with the Drug-Free Workplace Act of 1988 and the Drug-Free Schools and Communities Act, Amendment of 1989. Information regarding these acts and the College's compliance with them is distributed to the college community yearly and is also available from the Director of Human Resources.

Alcohol Policy

Fitchburg State College enforces all state laws and city ordinances regarding the possession, use, and sale of alcoholic beverages including those prohibiting drinking by individuals under 21 years of age. College policy restricts when, where, and how alcohol may be served and the amount of alcohol that a resident student may bring into the residence halls.

The FSC community recognizes the importance of personal and communal responsibility with regard to its alcoholic beverage policy. It assumes that any student who has consumed alcohol accepts responsibility for his/her consequent behavior. Being intoxicated will not be accepted as an excuse for erratic, irresponsible behavior either to individual or others' person or property. Any student found to be irresponsibly intoxicated will be considered in violation of the Alcohol Policy and will be subject to the Student Judicial System.

Massachusetts law forbids the possession of, use, and sale of alcoholic beverages to persons under 21 years of age. The law also forbids falsifying age and identification cards. The college enforces the law and expects all students, faculty, administrators, and staff to abide by it.

Use or possession of alcoholic beverages in public areas (campus grounds, athletic events, parking lots, academic buildings, dining hall, Campus Center) regardless of age, except at approved functions, is prohibited. Open containers of any alcoholic beverage is a violation of this policy.

A complete copy of the Alcohol Policy is available in the Undergraduate Student Handbook or from the Office of Student Affairs.

Substance Abuse Policy

In accordance with the Drug-Free Schools and Communities Act, Fitchburg State College has adopted the following Substance Abuse Policy:

> Only in an environment free of substance abuse can the college fulfill its mission of developing the professional, social, cultural, and intellectual potential of each member of its community. The use of illicit drugs and alcohol impairs the safety and health of students and employees, inhibits personal and academic growth and undermines public confidence in the college. For these reasons, it is the policy of Fitchburg State College that all college activities and college property shall be free of the unlawful use of drugs and alcohol.

Prohibited Conduct

The students and employees of Fitchburg State College shall not unlawfully manufacture, distribute, dispense, possess, or use controlled substances or alcohol. Any individual who violates this prohibition will be subject to disciplinary action. Sanctions may include expulsion or firing from the college, mandatory participation in an alcohol/drug abuse assistance or rehabilitation program, as well as referral of the matter to law enforcement agencies for prosecution.

Students and employees are required to notify the Director of Human Resources (and, in the case of students, the Director of Financial Aid) within five days of being convicted of violating a criminal drug statute in the workplace.

A complete copy of the Substance Abuse Policy is available in the Undergraduate Student Handbook or from the Office of Student Affairs.

No Smoking Policy

Effective July 1, 1994, Fitchburg State College became a smoke-free environment. Smoking is not allowed inside any college building with the exception of bedrooms in residence halls.

Those members of the college community who have special difficulties in complying with a smoke-free environment are urged to seek the assistance of either the Human Resources or the Health Services Office.

Inclement Weather Policy

Whenever inclement weather, usually in the form of snow and/or ice, makes driving conditions exceptionally hazardous, classes for that day will be canceled. In the event that day classes (on-campus and/or off-campus sites) are canceled, all evening classes and programs for that date are automatically canceled. Make up sessions are required.

Cancellation announcements can be heard on:

WEIM	(1280/AM)	Fitchburg
WXLO	(104.5/FM)	Fitchburg/Worcester
WINQ	(97.7/FM)	Winchendon
WGAW/WSRO	(1340/AM)	Gardner
WTAG/WSRS	(580/AM; 96.1/FM)	Worcester
WEEI	(850/AM)	Boston
WBZ Storm Center	(1030/AM; TV News 4)	Boston
WCAT	(99.9/FM)	Orange
WFGL	(960/AM)	Fitchburg
WCVB-TV5		Boston
WRKO-7 News		Boston
WXPL	91.3/FM	FSC Campus Radio (after 8:00 am)

or by calling 978-665-3006 (residence students), or 978-665-4003 (off-campus, commuter students.)

The decision to cancel classes scheduled for weekends or holidays rests with the instructor. Students should consult with their instructor for his/her class cancellation and make up policy.

Waiver of Academic Regulations

The college acknowledges that extenuating circumstances relative to rules, regulations, and programs occasionally require a waiver of regulations. Although a student may petition for a waiver, they should understand that the justification for a waiver should be as exceptional as the granting of one.

Petitions for a waiver of regulations begin with the Undergraduate Dean for day students and with the Graduate Dean for gradnate students.

The provisions of this catalog are not to be regarded as an irrevocable contract between the College and its students.

Admissions

Students who seek a quality education are invited to apply for admission to Fitchburg State College. Fitchburg State welcomes applications from high school graduates, students returning to college after a hiatus, transfer students, and international students. After careful review of the application and supporting materials, admission is offered to students whose secondary school and/or college records and backgrounds offer the promise of a successful and satisfying undergraduate experience.

Undergraduate Admissions

Admission Standards

Fitchburg State College is committed to providing excellent, accessible, and affordable life-long learning opportunities in undergraduate, graduate and continuing education. The college seeks students who are motivated to achieve academic excellence, and who represent a broad variety of backgrounds and interests.

With the guiding principles of quality, access and diversity in mind, Fitchburg State has adopted standards which exceed the minimum standards established by the Commonwealth of Massachusetts. These standards provide a framework for the individual evaluation of each applicant to the college.

Campus Visits

The Admissions Staff encourages all applicants to visit the Fitchburg State College campus. A variety of visitation programs, including student guided tours, are available to people interested in learning more about the campus and its programs.

Interviews are not required, but can provide the Admissions Committee with helpful information. Applicants who desire to have an interview are invited to call the Admissions Office for an appointment. The college encourages students with disabilities to discuss their situations with an Admissions Counselor so that the College can better accommodate their needs.

Admissions Office Hours

Monday, Tuesday, Wednesday, and Friday:
8:00 am to 5:00 pm
Thursday: 8:00 am to 8:00 pm
Saturday: 9:00 am to 12:00 pm (during the academic year)

Student guided tours are scheduled

Monday–Friday at 9:30 am, 11:30 am, and 2:30 pm.

Saturday at 9:30 am and 11:00 am (during the academic year)

For information about open house programs, individual interviews, and other visitation options, contact the Admissions Office at:

Admissions Office
Fitchburg State College
160 Pearl Street
Fitchburg, Massachusetts 01420-2697
Telephone: 1-800-705-9692 or 978-665-3144
Email: admissions@fsc.edu
Web Site: www.fsc.edu

Deadlines

Applications and all supporting material for undergraduate applications must be submitted:

- Between October 1st and April 1st for freshman applying for the fall semester
- April 1st for transfer candidates applying for fall admission
- December 1st for freshmen and transfer students applying for spring semester

Fitchburg State College employs a "rolling admissions" policy. Rather than notify all applicants simultaneously, we do so on a continuing basis over a period of several months, beginning in the early part of January for September applicants.

There are no deadlines for applications to evening programs, which are accepted year-round.

P R O F I L E

Roderick Malcolm
Admissions Counselor

What started as a work-study job back in 1990 has evolved into a full-time career in the Admissions Office for Roderick Malcolm. As an Admissions Counselor, he is responsible for recruiting students of color to attend the College as well as reviewing all candidates for admission. But the work hasn't kept him from simultaneously forging ahead with a graduate degree in Counseling. He puts his studies to immediate use by serving as the advisor to the class of 1997 and to the Iota Phi Theta Fraternity.

Application Procedure

Application Procedures—First-Time College Students

To be considered for admission to the College, applicants must submit the following to the Office of Admissions:

1. A completed **Application for Admissions**

2. A **General Equivalency Diploma** (GED) or a **transcript** of the complete high school record through the first marking period of the senior year and verification of the completion of the following Academic Units:
   - At least four years of English
   - At least three years of Mathematics (including Algebra I and II and Geometry); a fourth year is recommended
   - At least three years of a college preparatory Science (2 units with lab, e.g., Biology, Chemistry, Physics)
   - At least two years of Social Science (including one year of U.S. History)
   - At least two years of a single Foreign Language (3 years recommended). Students for whom English is a second language may waive this requirement
   - At least two years of college preparatory electives (from the subjects listed above, from the Arts and Humanities and/or Computer Science. Computer Science is highly recommended.)

   If an applicant graduated from a high school that did not offer the required Academic Units and that high school has received a waiver from The Board of Higher Education, the applicant may substitute other college preparatory electives.

3. Scores from **Scholastic Aptitude Test** (SAT), or the ACT.* Although not required, the college welcomes the results of the College Entrance Board Achievement Tests.
   * Applicants with documented learning disabilities are exempt from taking any standardized college entrance aptitude test for admittance to any public institution in the Massachusetts (M.G.L. Chapter 15A, Sec 30).

4. An **essay** on personal goals or results from SAT II.

5. Letters of recommendation, while not required, are helpful in the evaluation process.

6. A resume of activities if time has lapsed between the time of high school graduation and the application process to Fitchburg State College.

Acceptance to FSC is contingent upon graduation from high school or equivalent preparation (GED).

Application Procedures—Special Admissions Applicants

A candidate who demonstrates the potential for academic success, has met the Academic Units requirement ("First-Time College Students"), and meets one of the three stipulations below is considered minimally qualified for admission as a special admissions applicant.

1 Applicants present an Individual Education Plan or the equivalent under Chapter 766 or Chapter 344. Also, applicants who have a demonstrated language disability that would preclude the applicant from learning a foreign language must substitute two units from the humanities and/or the social sciences.

2 Special talent applicants who satisfy the following:

- A combined SAT score of 900 or equivalent percentile rank from an ACT, TOEFL, or ELPT score
- Have declared a major, and
- Based upon the applicant's special talent, the major department chooses the requirements for application to the College and, after review, recommends the applicant for admission to that major. The department may require additional documentation such as a portfolio or writing sample and/or an interview.

3 Applicants who are educationally disadvantaged because of low income, limited English proficiency or racial discrimination must submit an SAT or ACT score for advising purposes. Applicants for whom English is a second language may substitute scores from the TOEFL or the ELPT.

Minimum qualification does not guarantee acceptance to the college.

Application Procedures—International Students

Fitchburg seeks a culturally diverse campus and welcomes applications from students from other countries.

In addition to the basic admissions requirements for new and transfer students, international students must submit several items, including:

- The Test of English as a Foreign Language (TOEFL) with a minimum score of 500, is required if the applicant's native language is not English
- The Test of Spoken English (TSE) may be requested if proficiency is not indicated
- An official bank statement showing that sufficient funds will be available to support the student for one academic year. Students may also submit INS form I-134.
- These documents should be forwarded by April 1 for the fall semester and November 1 for the spring semester
- All transcripts should be sent directly from the original institution to the admissions office. Hand-carried copies will not be considered official.
- A copy of all past I-20's and/or IAP 66's
- Students on F-1 visas must study on a full-time basis (12 credits/semester) and are not eligible for state or federal financial aid.

Application Procedures—Non-Traditional Students

A non-traditional student is a student who does not enter college immediately after completing high school. Generally the student has experience in a career, at home, or in the military.

Admissions requirements are similar to those of any new student; including:

- High school transcript
- SAT or ACT scores*
- Letters of recommendation
- Resume of activities showing life experience

* Waived if student is out of school three years

Application Procedures—Part-Time Non-matriculating Students

A non-matriculated student is a high school graduate who is not applying for a degree program but wishes to enroll in college courses. In the Day Division these students may apply to enroll in a maximum of three courses or 11 credits. Registration for non-matriculated students is scheduled after the degree-seeking students have registered. In the Evening Division, nonmatriculating students (those not enrolled in Continuing Education degree or certificate programs) may take courses for which they have fulfilled any specified prerequisites.

Dual Enrollment Program

The Commonwealth of Massachusetts will pay for college-level courses for juniors or seniors in high school with the following:

- 3.0 or better Grade Point Average
- Recommendations from the high school to take college level courses

Fitchburg State College encourages high school students to participate in this program and holds special registration for these students each semester. Please contact the Admissions Office for additional information at 978-665-3144.

Joint Admissions

Students enrolled in Massachusetts Community Colleges may seek joint admission to Fitchburg State College. Such a student must complete an Associates Degree in a Transfer Program, which enables them to continue their education at FSC as juniors. Requirements for joint admissions are:

- Completed Associate's Degree with 2.5 average in a Transfer Program
- Approval of the appropriate academic departments
- Presentation of appropriate credentials (a second admission review is not required)

Application Procedures—Transfer Students

Transfer students who want to be considered for admission to the college must meet the following criteria:

- Twelve or more semester units (eighteen quarter units) of college credit must be earned by planned entrance date. Students with less than 12 semester credits are considered first-time college students.
- A grade point average of 2.0 or better with 24 or more transferable credits from an accredited college or university or a 2.5 or better with 12 to 23 transferable credits. Having such an average, however, does not guarantee admission to specific programs.

The following credentials must be submitted:

- An **Application for Admission**
- **Transcripts** of all previous college work, including a statement of honorable dismissal from the last college attended
- A 300-word **essay** describing your educational goals and motivation to go to college
- A final **high school transcript**

Evaluation of Credit

The amount of credit that will transfer into an FSC program is determined only after the student has been accepted to the college. Transfer credit is normally granted under the following conditions:

- Work was completed in an accredited college and/or university and the student received a C- or better
- Transferred courses which correspond with those offered at Fitchburg State College will be given full credit. Courses which do not fit the degree program may be counted as fulfilling the free elective requirements of the four-year curriculum

Students transferring from two-year institutions will be entitled to a maximum of two years of credit (60-64 semester hours). Students transferring from baccalaureate level institutions may be entitled to more, but they may not transfer more than 50% of the total credit hours required in their major. They also must complete a minimum of forty-five credit hours in residence in order to receive a degree from Fitchburg State College.

The grade point average from previously attended colleges and universities is dropped, and a new GPA is established, reflecting the student's performance while matriculating at Fitchburg State College.

For some transfer students, the requirements and provisions of "The Commonwealth Transfer Compact" apply. The complete text of the "Compact" is printed following this section.

The Commonwealth Transfer Compact

January 1990

For students transferring from Massachusetts community colleges to public colleges and universities offering the baccalaureate degree.

Section I: Requirements for Transfer Compact Status

A student shall be eligible for Transfer Compact status if he or she has met the following requirements:

- Completed an Associate's degree with a minimum of 60 credit hours exclusive of developmental course work
- Achieved a cumulative grade point average of not less than 2.0 (in a 4.0 system) at the community college awarding the degree
- Completed the following minimum general education core exclusive of developmental course work:

English Composition/Writing	6 credit hours
Behavioral and Social Sciences	9 credit hours
Humanities and Fine Arts	9 credit hours
Natural or Physical Sciences	8 credit hours
Mathematics	3 credit hours

The sending institution is responsible for identifying the transcript of each student who is a candidate for transfer under this compact.

Section II: Credits to be Transferred

The 35 credits in general education specified in Section I will be applied toward the fulfillment of the receiving institution's general education requirements.

A minimum of 25 additional credits will be accepted as transfer credits by the receiving institution. These credits may be transferred as free electives, toward the receiving institution's additional general education requirements, toward the student's major, or any combination, as the receiving institution deems appropriate.

Only college-level credits consistent with the standards set forth in the Undergraduate Experience recommendations are included under this Compact. Credits awarded by the sending institution through CLEP, challenge examinations, and other life-experience evaluations for course credit may be included when the community college certifies that a student qualifies under this Compact.

Section III: Credits Beyond the Associate Degree

To complete the baccalaureate degree, a student who transfers under this Compact may be required to take no more than 68 additional credits unless:

- The student changes his or her program upon entering the receiving institution; or
- The combination of additional general education requirements, if any, and the requirements of the student's major at the receiving institution total more than 68 credits

Under these circumstances, transfer students will be subject to the same requirements as native students. (The term "native student" refers to students who began their undergraduate education at the baccalaureate institution.)

Section IV: Admission to Competitive Majors or Programs

If, because of space or fiscal limitations, the receiving institution does not admit all qualified applicants to a given major or program, the receiving institution will use the same criteria for applicants who are transfer students under this Compact as it does for its native students.

Section V: Transfer Coordinating Committee

A Transfer Coordinating Committee, convened by the Higher Education Coordinating Council of the Commonwealth of Massachusetts, will monitor use of the Transfer Compact, resolve appeals as they pertain to the provisions in this document, and collect and analyze relevant data.

Section VI: Publication of Requirements

Each public college and university shall include in its official undergraduate catalog the provisions of the Commonwealth Transfer Compact. A transfer student may not be held to any degree requirements at the receiving institution that were established less than three years prior to transfer admission.

Section VII: Transfer Records

The student with Transfer Compact status will be provided (by the receiving institution) a list of courses to be fulfilled to earn a baccalaureate degree, no later than the end of the semester the student enrolls. With the agreement of the student, a copy will be provided to the Transfer Officer at the sending community college.

Section VIII: Transfer Officer

The President or Chancellor of each public institution of higher education will identify an individual who serves as that institution's Transfer Officer. The Transfer Officer's responsibility will be to assist students with transfer activities.

Section IX: Student Appeals

A student who believes that the provisions of this Compact have not been applied fairly to his/her transfer application has the right to appeal.

Initially, differences of interpretation regarding the award of transfer credit shall be resolved between the student and the institution to which he/she is transferring. If a difference remains unresolved, the student shall present his/her evaluation of the situation to the institution from which the student is transferring. Representatives from the two institutions shall then have the opportunity to resolve the differences.

Absent a satisfactory resolution, differences of interpretation may be presented to the Transfer Coordinating Committee.

Section X: Effective Date

The Commonwealth Transfer Compact takes effect January 9, 1990.

New England Regional Student Program

This program enables residents of Connecticut, Maine, New Hampshire, Rhode Island, and Vermont to be considered for admission to programs of study not offered by public colleges in their home states. Applicants selected under this program are granted reduced tuition rates (50% above regular in-state tuition, rather than full out-of-state tuition). For further information, please contact the Admissions Office or the New England Board of Higher Education, 45 Temple Place, Boston, Massachusetts 02111.

Tuition and Fees

Undergraduate Day Tuition and Fees

All costs listed below reflect Board of Trustees policy as of December 1, 1997. The Board of Trustees or the Board of Higher Education reserves the right to adjust the fees. Funds accrued for educational purposes are applied on a first funds received, first funds applied to bill basis.

1998–1999 Tuition Rates

- In-state students ..... $1,210/annum $605/semester
- Out-of-state students ..... $6,450/annum $3,225/semester

Students aged 60 or over may enroll in classes tuition-free, provided seating is available after the registration of tuition-paying students.

1998–1999 Standard Fees

The fees listed below are on a per year basis and are payable in equal installments at the beginning of each semester, except where indicated.

Application Fee, In-state $10
(not refundable or applicable to tuition, one time only)

Application Fee, Out-of-state $40
(not refundable or applicable to tuition, one time only)

College Fee $1,760

Health Insurance (per annum) $566
(required only if not covered by private insurance)

MASSPIRG (optional) $14

Student Activity Fee $60

Capital Projects Fee $168

Room and Board

The college offers a variety of on-campus housing as described in the Student Life section of the catalog.

Residence Hall ..... $2,590/annum $1,295/semester

The college offers four different meal plans. One of the four plans must be selected by students living in Residence Halls. The meal plans are optional for students assigned to Town Houses or living off-campus. Students living off-campus have the option of subscribing to a lunch plan.

19 Meal Plan ..... $1,850/annum $925/semester

15 Meal Plan ..... $1,680/annum $840/semester

10 Meal Plan ..... $1,560/annum $780/semester

Lunch Plan ..... $ 770/annum $385/semester

Deposits

The following advance deposits are nonrefundable:

- Fee bill deposit $85
(paid once at time of acceptance;
credited toward first semester fee bill)
- Residence Life Deposit $50

The Residence Life Deposit is required of all students accepting accommodations and is credited against the second semester room charge. No refunds of this deposit are granted if second semester occupancy is terminated for any reason.

Payment Options

Bills can be paid in the form of cash, cashier's checks, money orders, bank checks, traveler's checks, MasterCard, VISA, or personal checks. Fitchburg State College also has a tuition payment plan that is administered directly through the Tuition Management Services (TMS).

Any payments that become past due immediately jeopardize the student's enrollment. Until debts are cleared, a student will not be permitted to graduate or to register for a subsequent semester or summer session. Furthermore, the student may not be issued diplomas, degrees, or other official statements unless otherwise mandated by law. Any collection costs associated with the collection of this debt is the responsibility of the student.

Please Note: A student will be charged $25 for any personal checks returned to the college by the bank. A $25 late payment fee will also be incurred.

Refund Policy

- First-time attendees receiving Federal Financial Aid: Prorata Refund Policy
- Non-first-time attendees receiving Federal Financial Aid: Federal Refund Policy
- Student not receiving Federal Financial Aid: Same as Federal Refund Policy
- Students dropping below full time: Same as Federal Refund Policy but for only a 3-week period

Enrollment Period

The fall and spring terms are a 15-week schedule. The 50% point is up to the seventh week. The 60% point is up to the ninth week of school.

All Returning Students and First-Time Attendees Without Federal Title IV Aid

Withdrawal prior to the start of classes	100%
Before the beginning of the second week	90%
From the second week but before the third week	50%
From the third week but before the fourth week	50%
From the fourth week but before the fifth week	25%
From the fifth week but before the sixth week	25%
From the sixth week but before the seventh week	25%
From the seventh week but before the eighth week	25%
From the eighth week but before the mnth week	0%
From the ninth week but before the tenth week	0%

Students who withdraw after the seventh week will have no adjustments to their charges.

Federal Prorata Refund Policy— First-Time Attendees With Federal Title IV Aid

Withdrawal prior to the start of classes	100%
Before the beginning of the second week	90%
From the second week but before the third week	80%
From the third week but before the fourth week	80%
From the fourth week but before the fifth week	70%
From the fifth week but before the sixth week	60%
From the sixth week but before the seventh week	60%
From the seventh week but before the eighth week	50%
From the eighth week but before the ninth week	40%
From the ninth week but before the tenth week	40%

Students who withdraw after the ninth week will have no adjustments to charges.

Dropping Courses Below Full-Time

This is the refund policy proposed for all part-time students who drop state supported courses during the first three weeks of school.

Dropping prior to the start of classes	100%
Before the beginning of the second week	90%
From the second week but before the third week	50%
From the third week but before the fourth week	50%
After the fourth week	0%

Refund will only be generated if the total payments exceed total charges after adjustments have been generated.

Health Insurance

All students registering for nine or more semester hours must be enrolled in a student health insurance plan offered by the college or in a private health insurance program with comparable coverage. Students covered by insurance other than that offered by the college must sign a waiver card. If a waiver card is not signed, a student will be automatically billed $566 a year for the college insurance plan. To obtain a brochure about the college sponsored insurance, please call 978-665-3130.

Undergraduate Evening and Graduate Tuition and Fees

1998–1999 Tuition Rates

The Graduate and Continuing Education tuition charges for all students are as follows:

Undergraduate ..... $110 per semester hour of credit

Graduate ..... $140 per semester hour of credit

1998–1999 Standard Fees

All students must pay the following fees, which are nonrefundable unless a course is cancelled by the college:

Application Fee $10
(nonrefundable or applicable to tuition, one time only)

Comprehensive Registration Fee ..... $55 each semester

Capital Projects Fee ..... $7 per credit

Late registration fee $25

Students auditing classes pay regular tuition and fees. Tuition vouchers do not extend to Independent Studies.

Payment Options

Payment for tuition and fees must be made at time of registration in the form of cashier's checks, money orders, bank checks, traveler's checks, personal checks, MasterCard, or VISA.

Any payments that become past due immediately jeopardize the student's enrollment. Until debts are cleared, a student is not permitted to graduate or to register for a subsequent semester or summer session. Furthermore, the student may not be issued diplomas, degrees, or other official statements unless otherwise mandated by law.

Please note: All returned checks require a $25 bad check fee to cover increasing charges by financial institutions. Students who do not respond to notification to rectify their account will have their account placed on hold and will be placed in the collection process.

Refund Policy

The amount of a refund to a student depends on the official date of the student's withdrawal. The official date of withdrawal is the date when the Graduate and Continuing Education Office receives the completed withdrawal form.

Refunds for courses designated "Special Scheduling":

100% refund one week prior to the first class meeting

50% refund one day prior to first class meeting

No refund of tuition on the first day of class or thereafter

If a course is canceled by the college, a student receives a full refund of tuition and fees.

Refunds

Refunds are determined by the number of hours a class has met:

Class hours

Prior to the first class meeting ..... 100% refunded

0-2.5 hours ..... 90% refunded

2.6-7.5 hours ..... 50% refunded

No refunds issued after 7.5 hours ..... 0% refunded

If a course is canceled by the college, a student receives a full refund of tuition and fees.

Refunds for Federal Financial Aid

See previous page for complete information.

Students Over Sixty Years of Age

There is no tuition charge for students over 60 years of age enrolling in credit yielding graduate or undergraduate courses. They are welcome to enroll in any class, provided space is available after the registration of tuition paying students. Students over sixty years of age are responsible for paying fees.

Tuition waivers do **not** apply to non-credit Life-long Learning courses, conferences, teleconferences, or professional development seminars and lectures sponsored by the Division of Graduate and Continuing Education.

Health Insurance

All undergraduate students registering for nine or more semester hours and graduate students registering for 6.75 credits or more must be enrolled in a student health insurance plan offered by the college or in a private health insurance program with comparable coverage. Students covered by insurance other than that offered by the college must sign a waiver card. If a waiver card is not signed a student will be automatically billed $566 a year for the college insurance plan. To obtain a brochure about the college sponsored insurance, please call 978-665-3181.

Financial Aid

The Financial Aid Office at Fitchburg State College is committed to providing an affordable education for every student admitted to the school. The college adheres to the basic premise that the student and family are primarily responsible for meeting college costs. Financial aid is available to assist with the educational expenses that remain after the family's resources have been taken into account.

Application Process

Financial aid funds are awarded on a first-come, first-served basis, according to demonstrated financial need. In order to receive priority consideration, students must file:

- the Free Application for Federal Student Aid (*FAFSA) with the federal processor by March 1st
- the Fitchburg State College Financial Aid Application with the FSC Financial Aid Office by March 1st
- any additional information needed to complete an applicant's file as requested in writing by the Financial Aid Office

Applications are accepted and processed after the priority dates listed above. Late applications will be reviewed on a funds available basis. All applications must be made prior to the academic year in which the applicant will be attending college to ensure the availability of financial aid to put toward the fall semester's bill.

*The FAFSA may be obtained from the Financial Aid Office or from the guidance department of most secondary schools. Each FAFSA requires four to six weeks to process.

Please remember that financial aid is not automatically renewed. It must be applied for each year.

Financial Aid Programs

Financial aid programs fall into three main categories:

- gift aid
- student loans
- work programs

Financial Aid for Undergraduate Students

Gift Aid

Gift aid is usually in the form of grants or scholarships and does not need to be earned or repaid. The following gift aid programs are available to undergraduate students at Fitchburg State College:

The Federal Pell Grant, named after its sponsor, Senator Claiborne Pell, is a federally funded entitlement program designed to assist undergraduate and continuing education students who have exceptional need. Grants range from $400 to $3,000 per academic year (July 1st to June 30th).

The Federal Supplemental Educational Opportunity Grant (SEOG) is a federally funded program, which awards funds to undergraduate students with extreme financial need and who would otherwise be unable to attend a postsecondary institution. Grants range from $200 to $1,000 per academic year, although they are limited by the amount the college is allocated.

Massachusetts State Grant Programs

These programs are administered by the Office of Student Financial Assistance (OSFA) of the Commonwealth of Massachusetts. To qualify for the following two programs students must be enrolled **full time.** The Financial Aid Office verifies information and processes payments for state grant programs.

MA State Grant is gift aid based on financial need. Grants range from $250 to $900 per academic year. Students are notified of their eligibility by the OSFA and must complete the requirements as stated in their award letter.

Performance Bonus is gift aid awarded based on financial need and academic achievement. Students must earn at least 24 college credits and maintain a cumulative Grade Point Average of 3.0 or higher. The Performance Bonus is awarded in addition to the MA State Grant.

MA Cash Grant is gift aid from FSC funded by the Commonwealth of Massachusetts.

Tuition Waiver is a state-funded program for Massachusetts residents. Applicants with a demonstrated need can receive a reduction in tuition. Award amounts vary, but they cannot exceed the total tuition cost for which a student is billed.

Other State Grants

Students from other states may be eligible to receive a grant or scholarship from their respective state. Each program has its own individual guidelines and deadlines. Students are urged to contact the appropriate agency in their state for further information.

Fitchburg State College Scholarships

In addition to the gift aid programs already listed, FSC has numerous scholarships of its own. These scholarships are administered by the College Scholarship Committee or by the appropriate area representative. To assist in the evaluation of need a Scholarship Application or a Free Application for Federal Student Aid (FAFSA) may be required. Scholarship applications are available in the Financial Aid Office.

Alumni Legacy Scholarships are available to full-time students who have a parent, grandparent, spouse, sibling or dependent who is a Fitchburg State College alumnus/a. Priority is based on academic excellence and/or financial need.

Vincent J. Mara Scholarship is available to full-time students currently enrolled at Fitchburg State College, who are demonstrating academic excellence with a GPA of 3.5 or above. Community service or extracurricular activities are considered, but not required for application. A letter of recommendation from a member of the faculty is preferred.

Jean-Bertrand Aristide Scholarship is awarded every four years to a Haitian National in honor of His Excellency, Mr. Jean-Bertrand Aristide, former President of the Constitutional Government of the Republic of Haiti.

Fitchburg State College Citizen's Award is awarded to full-time entering freshmen or transfer students who have achieved a combined SAT score of 1000 and have a 3.3 GPA. Transfer students must hold an Associates Degree to be considered. Preference is given to students who have demonstrated leadership in school or community activities. No application is necessary. For information contact the Admissions Office.

City Year Scholarship is awarded every four years to a graduate of the Boston City Year Program. For information contact the Financial Aid Office.

Departmental Scholarships offer a unique opportunity for upperclass students to work closely with the departmental chair in their discipline. High consideration is given to those students with a record of academic excellence and previous departmental service. Financial need is not a requirement for consideration and award decisions are made through each specific department.

Fitchburg Business and Professional Women's Club Scholarship is awarded to a full-time female student whose permanent residence is Ashby, Ashburnham, Fitchburg, Lunenburg, Townsend, or Westminster. One academic year at the college must be satisfactorily completed.

Martin Luther King Scholarship is awarded to full-time entering freshmen who are members of a minority group and who demonstrate academic achievement and financial need.

Fitchburg State College Merit Scholarship is a renewable scholarship awarded to full-time entering freshmen and transfer students. Freshmen must have a combined SAT score of 1100 and have a 3.5 GPA. Transfer students must he graduates of a Massachusetts puhlic community college and have a 3.3 GPA. No application is necessary. For more information contact the Admissions Office.

Presidential Free Tuition Scholarships are awarded to entering students who graduated from high schools in Massachusetts. The scholarship recognizes scholastic achievements and requires a combined SAT score of 1200 or higher and a 3.5 GPA.

The President's Scholars Awards are available to undergraduate students who have completed a minimum of 15 semester hours at the college and have achieved a grade point average of at least 3.75.

Special Fee Scholarship is available to full-time day students with financial need and who have applied for federal financial assistance through the Office of Financial Aid.

Sterilite Corporation Scholarship is awarded to a student who demonstrates financial need.

Student Government Association Scholarship are available to sophomores, juniors, and seniors with a grade point average of 2.2 or higher and a record of student leadership.

Senator Paul E. Tsongas Scholarship Program is awarded to entering students who are high achievers and Massachusetts' residents. The scholarship is in the amount of tuition and fees and is renewable with a 3.2 grade point average.

VNA (Visiting Nurses Association) Trust Scholarship is awarded to a Nursing major by the Nursing Department.

Class of 1955 Scholarship is available annually to a full-time student of FSC.

Class of 1967 Scholarship is available annually to an FSC student chosen on the basis of academic merit and financial need.

The following Fitchburg State College scholarships are named in grateful recognition of their benefactors:

Ken and Cheryl Ansin Scholarship is awarded to a non-traditional Human Services undergraduate student.

Matti N. Antila Poetry Award is awarded annually to a junior for a poetry composition. The award is made possible by Lauri and Signe Sipila in memory of Signe Sipila's parents, Matti N. and Fanny P. Antila.

W.E. Aubuchon Scholarship, Jr. is awarded to an FSC student selected by the Financial Aid Department

Leo J. Bourque Memorial Scholarship is awarded to a full-time undergraduate, who is at least a three-year resident of Leominster and who demonstrates financial need.

Richard E.T. and Linda A.C. Brooks Scholarship in memory or Elmer V. and Eileen M. Brooks. Seven available annually to students who meet the following criteria: (a) financial need (b) academic promise based on actual high school record (c) intent to major in a science degree program (preference to Chemistry but not limited to and (d) interest, based on high school actual performance, in participating in varsity athletics. Preference is given to the children of ChemDesign.

Mary F. Burnham and Mary Frances Burnham Scholarship Fund is available to full-time undergraduate students who have completed at least one semester at Fitchburg State. Students must be currently working to support their education. Those who demonstrate financial need preferred.

Stephen W. Clair Memorial Scholarship is awarded to a student with financial need who is a Geography/Earth Science major, has earned at least 30 credits, has at least a 3.0 GPA, and is an active member of the Geography Club.

William E. Clark III Memorial Scholarship is awarded to a student who evinces academic achievement, financial need, and the potential to succeed.

Robert Fitzmaurice Connors '63 Scholarship is awarded to a full-time student in the early childhood education program who demonstrates the ability to be an outstanding early childhood educator.

Garrett Conrad Scholarship is awarded annually to a student with a disability. Applicants must be registered with Disability Services; qualify under ADA; enrolled for at least six credits each semester, and have completed at least one semester at Fitchburg State College. Preference is given to students with an outstanding record of service and commitment to the college and community.

The Elaine T. Coyne Women in Film Scholarship is available to a female student under criteria established by the Communications/ Media department.

Wallace Cunningham Scholarship is awarded to a student with a demonstrated financial need and whose academic record proves high achievement.

Dr. Edward T. Donnelly Scholarship is available annually to a full-time undergraduate student with a teacher education major or minor and a demonstrated financial need.

Henry Frank Scholarship is awarded to full-time entering freshmen and transfer students from Norwalk, Connecticut, or from within a fifteen-mile radius of Orange, Massachusetts. Preference is given to the former and selection is based on academic achievement.

Fitchburg Mutual Insurance Company W. Bruce Adams Scholarship is available annually to a graduate of a public high school in one of the following towns: Ashburnham, Ashby, Fitchburg, Leominster, Lunenburg, or Westminster, who meets income (adjusted gross income $40,000–$60,000) and academic (3 pt. average or better on a four pt. scale) criteria.

Donovan Engineering & Construction Co./Bud Greenwald Scholarship is awarded annually to a senior majoring Industrial Technology with a construction Technology concentration, a minimum 3.2 GPA, and the desire to enter the construction profession.

Grace Gummo Nursing Scholarship is awarded to deserving students in the Nursing Program.

Patrick and Mary Hammond Band Scholarship is awarded to a full-time undergraduate student chosen as the outstanding member of the Fitchburg State College Band.

Leo J. Hines Memorial Scholarship is awarded to a qualified English major demonstrating academic excellence.

Kirkpatrick-Percival Scholarship is awarded to an outstanding senior Psychology major.

Jacqueline LaCoy Scholarship offers the opportunity for returning communications/media students to work closely with television production faculty. Priority is given to students with a record of television production excellence, previous departmental service, and an interest in teaching television production.

LeBlond-O'Sullivan Memorial Scholarship is awarded to full-time juniors or seniors with financial need and a record of service to the college.

Ruth Lee Scholarship is available annually to a student from the North Central Massachusetts Region, (one of the cities and towns included in the North Central Mass. Chamber of Commerce membership), on the basis of academic merit.

Myra McGuirk-Bonitz Scholarship is available annually to an undergraduate student graduating from a high school within the Fitchburg city limits who has chosen education as a major field of study.

Buddy McMurray Good Fellowship Award is given to a student whose contribution to the college is positive, salutary, and inspirational, as well as indicative of the goals he or she set by entering Fitchburg State.

John McNaney Memorial Scholarship is available to an outstanding Chemistry major.

Dorothy Meilinger Memorial Scholarship is awarded to seniors majoring in Special Education, who have a Grade Point Average of 3.5 or above and a demonstrated financial need.

Annette Rose Mitchell Scholarship Fund is awarded to a senior Nursing student who has maintained a 3.0 GPA for three years.

Flora D. Mulholland Memorial Scholarship is awarded to a Nursing major evincing high scholastic achievement and a demonstrated financial need.

Kathleen Mary O'Neil Scholarship is awarded to a full-time female undergraduate student who is a citizen of the United States and has a class rank in the upper 50th percentile.

The Owens-Mara Award is available to an elementary education major completing junior level work during the spring semester and selected by the education department based upon promise as a future elementary leader.

John L. Powers Memorial Scholarship is awarded to an Industrial Technology major who has maintained at least a 2.0 GPA and demonstrates financial need.

Clifford Querolo Scholarship is awarded to a student in the Industrial Technology Program or to a student who intends to teach industrial, vocational, or occupational education.

Michael P. and Barbara Riccards Scholarship is available annually to an undergraduate student on the basis of financial need and academic record.

Louis P. Shepherd Award in Creative Writing is given annually for the year's best student portfolio of creative writing. The award is named in honor of the late Louis P. Shepherd, a longtime English professor at Fitchburg State College, and made possible through a gift from Professor Shepherd's wife, Ruth, and his daughter, Rae Shepherd-Shlechter.

M. Lillian Smith Scholarship is awarded to a student in the Education Program.

Special Education Scholarship is available annually for a Special Education major student with a 2.7 average in the major who has a financial need and is active in the Special Education Club.

Daniel J. Sullivan Scholarship is available to students demonstrating financial need.

Philip J. Tardanico Scholarship is awarded to a junior enrolled as an Industrial Technology major. The scholarship is based on academic excellence, enthusiasm for and commitment to a career in teaching, strong moral character, and financial need. A letter of reference must be submitted from a faculty member in the Industrial Technology Department.

Michael Vignale Memorial Scholarship/Trust Fund is available to a Chemistry major.

Dr. Burnham Walker Memorial Scholarship is awarded to a full-time student majoring in Biology, Chemistry, Nursing, or Clinical Lab Sciences. Awards are based on financial need and academic achievement.

Anita Wallace Scholarship is awarded to an undergraduate student at the April Honors Convocation for the following academic year. To be granted to a nursing student who has demonstrated financial need.

Lara A. Willard Memorial Scholarship is available annually to a female undergraduate nursing student based upon achievement, a demonstrated financial need, and the potential to succeed.

Carl T. Witherell Scholarship is awarded to a full-time undergraduate enrolled as an Industrial Technology major.

Xarras Scholarship is awarded to a full-time undergraduate student. Preference is given to graduates of Fitchburg High School.

Student Loans

Student loans are long-term, low-interest loans, which come due only after graduation, withdrawal from the college, or upon less than half-time enrollment. Student eligibility for these loans is based on financial need and availability of funds. To apply for the loans indicated below both the FAFSA and FSC Application for Financial Aid are required. Once students are awarded a loan or loans, additional paperwork is required.

Federal Perkins Loan

- Low-interest (5%) loan from the federal government and FSC
- Repayment begins nine months after the student either leaves school or drops below half-time status
- Provisions for deferment, postponement, or cancellation are available for some specialized areas

Nursing Student Loan

- Assists students who are furthering their education in Nursing
- Low-interest (5%) loan from the federal government
- Repayment begins nine months after a student leaves school or drops below half-time status
- Provisions for deferment, postponement, or cancellation are available for some areas

For more information about repayment and deferment contact the Loan Collections Office, located in the Treasurer's Office.

Massachusetts No-Interest Loan Program

- Zero interest loan from the Commonwealth of Massachusetts
- Repayment begins six months after a student leaves school or drops below half-time status

Federal Direct Student Loan Program (also known as the Stafford Student Loan) enables students with a demonstrated financial need to apply for a loan directly to FSC, instead of applying through a bank. If a student qualifies for a Subsidized Direct Loan:

- The federal government pays the variable interest rate on the loan while the student is in school
- Repayment begins six months after graduation, withdrawal from classes, or upon less than half-time enrollment

An **Unsubsidized Direct Loan** is available to students who do not demonstrate financial need or who are eligible to borrow additional funds beyond the subsidized loan:

- Loan has the same low variable interest rate as the Subsidized Loan
- Federal government does not make interest payments on behalf of the student
- Interest on the loan accrues once the loan is made. The interest payments can be deferred or paid while the student is in school.

For information on other educational loans, interest rates, eligibility standards, and requirements, applicants should contact the Financial Aid Office.

Student Employment

The college advocates 'earning while learning' as a supplement to the gift aid and loan components of a student's financial aid package. The current work programs include:

Federal Work Study

- Federally funded part-time employment on campus
- Students are paid an hourly rate every two weeks for time worked
- Hours to work are available during the academic year, holidays, and the summer
- Open positions are posted in the Financial Aid Office

Fitchburg State College Employment

- Part-time on-campus employment for a limited number of students
- Payment is according to the salary rate offered with the position
- Open positions are posted in the Financial Aid Office

Off-Campus Employment

The Career Services Center, located on the third floor of the Hammond Building, provides:

- Listings of part-time positions from the local community provided by the Career Services Center
- Positions are posted on a bulletin board in the G-Lobby of the Hammond Building
- Flexible hours are offered to accommodate academic commitments

Eligibility for Financial Aid

Determining Financial Need

Although Fitchburg State College does not set the standards to measure financial need, the Financial Aid Office will help students and their families with the process of applying under Federal and State guidelines. No student should assume that he or she is ineligible for financial aid. All students, regardless of family income, are encouraged to apply.

A student's financial need and financial aid eligibility is based on careful review of the information provided on the Free Application for Federal Student Aid (FAFSA) and the Fitchburg State College Application for Financial Aid. **Financial need** is figured based on the difference between expected **educational costs** and the **family or student contribution** toward those costs.

Educational costs vary according to the individual circumstances of the student, and include such items as tuition, fees, room and board, books, supplies, transportation, and personal expenses.

Family or student contribution is determined by the Federal formula known as Federal Methodology (FM), which factors in such items as income, assets, number in household, number in college, age, taxes, and other miscellaneous data. As a result the amount of family contribution may vary, even between households having approximately the same income.

Student Financial Aid Budgets

A student's financial aid budget is based on his or her cost of education, which includes both direct and indirect expenses.

Direct expenses are paid by the student to the college, including tuition, fees, and room and board (for on-campus students). These expenses are set by the college and the Commonwealth.

Indirect expenses are those over which the student has some control, including books, supplies, transportation, personal/miscellaneous, and room and board (for off-campus students). These expenses are based on estimated costs for students at FSC.

A typical budget for a full-time undergraduate student living in a residence hall for the 1997-98 school year is:

Tuition	$1,270
Fees	1,976
Room	2,590
Board	1,820
Books/Supplies	600
Transportation	350
Personal/Misc.	*1,500
Total	$10,106

* includes health insurance expense

A typical budget for a half-time continuing education student for the 1997-98 school year is below:

Tuition	$1,320
Fees	194
Room (off-campus)	1,800
Board (off-campus)	1,830
Books/Supplies	180
Transportation	500
Personal/Misc.	1,500
Total	**$7,324**

A typical budget for a graduate student carrying six credits each semester for the 1997-98 school year is:

Tuition	$1,680
Fees	194
Room (off-campus)	1,800
Board (off-campus)	1,830
Books/Supplies	300
Transportation	500
Personal/Misc.	1,500
Total	**$7,804**

Not all students will spend exactly these amounts. Budgets will vary depending on enrollment and housing status.

Students are awarded financial aid based on their total budget. When the money for a student's financial aid is actually received at the college, it goes first to satisfy the student's direct expenses. Once a student's bill with the college is satisfied, the balance of his or her aid is available and may be used to satisfy any indirect expenses the student may have.

Students should plan to start the semester with enough money for books and at least the first month's rent (if living off campus). Financial aid refunds will not be available to cover these expenses. The Treasurer's Office will notify the student about which aid has been received, which aid has been used to satisfy their bill, and which aid (if any) is available for their use.

Satisfactory Academic Progress

Eligibility for continued financial aid for a returning student is based on need (as detailed above) and Satisfactory Academic Progress (SAP). SAP is the **qualitative** and **quantitative** measurement of progress toward the completion of a course of study according to the standards of the college. Students are solely responsible for maintaining their academic progress. Those who have not done so will be notified of their ineligibility for financial aid during the award letter process.

SAP standards apply to all matriculated students.

Qualitative measure: students must maintain an appropriate cumulative Grade Point Average according to the regulations listed below.

To be in good academic standing, full-time undergraduate students must meet the following standards:

- Freshmen (0-30 credits) must maintain an overall cumulative GPA of 1.6 or higher at the end of two semesters.

- Sophomores (31-59 credits) must maintain an overall cumulative GPA of 1.8 or higher. Students with 60 credits or more must maintain a 2.0 cum to remain in good standing

Quantitative measure: based on credits successfully completed during the academic year, which runs from fall through the following summer.

- Full-time students must successfully complete 20 credits during each academic year
- Part-time students must successfully complete 67% of the number of attempted credits for each part-time semester

Students who have been denied financial aid because they were not making satisfactory academic progress may again receive aid the semester after attaining satisfactory academic progress.

It is the responsibility of the student to officially notify the Financial Aid Office of any changes to their academic standing. Aid cannot be awarded until this official notification is received.

Appeal Process

Students have the right to make an appeal to have their financial aid reinstated under the following circumstances:

- If extreme circumstances during the course of the academic year have impacted a student's academic progress, then a letter of appeal may be submitted to Academic Affairs
- If a student has not met the requirements but has demonstrated academic progress, a letter of appeal may be submitted to the Director of Financial Aid

These appeals will be reviewed with the Academic Dean. If the Dean determines that the student is making significant academic progress, they may be granted a one semester probationary period to make up course work. Winter and/or summer sessions may be used to make up credits or improve cumulative GPAs.

Aid for Veterans

U.S. Veterans are entitled to certain financial aid benefits at FSC. While all veterans are urged to keep informed about benefits available to them through the Veterans' Administration, they should contact the Registrar's Office to establish eligibility for such benefits. The Registrar's Office will provide the veteran with an Application for Benefits or the Change of Place of Training Form, whichever is applicable. Along with an application, the veteran needs to provide the following documents for the Registrar's Office:

- a DD214 Form notarized by a Veteran Notary
- his or her marriage certificate
- birth certificates for each dependent child

All veterans, whether or not exempt from paying tuition, must pay all fees.

For more information on Veterans' Education benefits write to:

Regional Office
Department of Veteran Affairs
JFK Federal Building, Government Center
Boston, Massachusetts 02203

Some Vietnam and Desert Storm veterans from Massachusetts are entitled to attend Fitchburg State College on a no-tuition basis.

Additional information may be obtained from:

The Commonwealth of Massachusetts
Department of Education
1385 Hancock Street
Quincy, Massachusetts 02169

Or, call the hot line at 1-800-827-1000.

IMPORTANT: As of July 1997, no new graduate student will be issued veterans' vouchers.

The Division of Graduate and Continuing Education will continue to issue veterans' vouchers through June 30, 2001 to graduate students who matriculated in degree programs prior to July 1997.

Financial Aid for Graduate Students

Graduate students are advised to review the complete financial aid section of this catalog beginning on page 29. Consult the Financial Aid Office for eligibility requirements.

Graduate Scholarship Program

Graduate scholarships are available in varying amounts. Scholarships are awarded in the form of tuition and fee waivers. For application deadlines, processes and procedures the student should contact the Graduate Office.

Dean's Graduate Scholarship

This award recognizes and honors graduate students who have achieved academic excellence in the course of their graduate studies. Scholarships in varying amounts, ranging between $55 and $1,800, are awarded annually in the form of tuition and fee waivers.

Eligibility

- Students who have applied to a graduate program at Fitchburg State College and have an undergraduate GPA of 3.5 or better
- Graduate students enrolled in a graduate program, have a GPA of 4.0, and are recommended by their Graduate Advisor or the Program Chair
- Minority students who meet either requirement above and seek teacher certification are given preference

Application and Selection Process

To apply for the Dean's Graduate Scholarship Awards, students must submit:

- Completed Scholarship Application
- Current Dated Resume
- Two letters of recommendation including at least one from a graduate advisor or graduate program chair
- Academic record/transcripts

The application and supporting materials should be mailed by **February 1st** to Dr. Michele Moran Zide, Dean of Graduate and Continuing Education.

The Carla Borg Scholarship

Available annually for a graduate student in special education who has demonstrated exemplary skills in including students with special needs as part of their school/community.

Dorothy Holmes Toporeck Graduate Scholarship Program

This award recognizes and honors students who have demonstrated scholastic excellence in their undergraduate studies and who are pursuing a Master's Degree at FSC. The scholarship is only available to graduates of the FSC undergraduate program.

The amount of the award is determined annually. Scholarships are awarded in the form of tuition and fee waivers and may be used over a period of two years.

Eligibility

Candidates must have completed their undergraduate degree at FSC with a 3.25 GPA or better, and have been accepted into a graduate program at the College.

Students currently enrolled in a graduate program must have a GPA of 3.75, an undergraduate GPA of 3.25 or better, and be recommended by their Graduate Advisor or the Program Chair.

Application and Selection Process

To apply for the Dorothy Holmes Toporeck Graduate Scholarship, students must submit:

- Completed Scholarship Application
- Current dated resume
- Two letters of recommendation, including at least one from a graduate advisor or graduate program chair, if currently a graduate student, and one from an FSC faculty member if a student is just entering a graduate program
- Academic record/transcripts

The application and supporting materials should be mailed by **February 1st** to Dr. Michele Moran Zide, Dean of Graduate and Continuing Education.

All scholarship applications are reviewed by the Graduate Council and recommendations are made to the Dean of Graduate and Continuing Education. Once award recipients are chosen, they are notified by the Dean and an announcement is made at the Honors Convocation in April.

For further information or applications, contact the Graduate and Continuing Education Office.

Graduate Assistant Program

Graduate students are eligible to apply for Graduate Assistantships. Assistantships in professional studies, Liberal Arts and Sciences, and CAGS are awarded on a competitive basis. These positions waive tuition for twenty-four hours of graduate course work and provide a stipend. Students must apply and meet eligibility requirements to be considered for an Assistantship position.

A complete application including the following documents must be on file in the Graduate Office by May 15.

- Completed Application for Graduate Assistantship
- Current Resume
- Two letters of recommendation promoting candidate's application for Graduate Assistant position
- Copy of the letter of acceptance to Graduate study at Fitchburg State College

Types of Assistantships

Graduate Teaching Assistantship

Graduate Research Assistantship

Graduate Administrative Assistantship

Qualifications

Newly accepted graduate students seeking appointments to Graduate Assistant positions must have an undergraduate GPA of 3.0 and two letters of recommendation. One letter of the two must address the academic potential of the student and may be a letter from the undergraduate department principal, agency, professional, etc.

Graduate students with a minimum of nine semester hours of graduate work must have a graduate GPA of 3.5 and the appropriate recommendations of two members of the faculty in the graduate program of study.

Stipend and Award

- Graduate Teaching, Research, and Administrative Assistants are paid $5,500 for the academic year beginning September 1 and ending June 30 providing for a biweekly stipend of $250.
- The appointment and award include a tuition waiver for 24 semester hours of graduate work to be completed within two years from the date of the appointment. Tuition waivers expire at the time of graduation from the matriculated degree program and cannot be carried over.
- Tuition waivers do not apply to independent studies
- Graduate Assistants must pay all fees

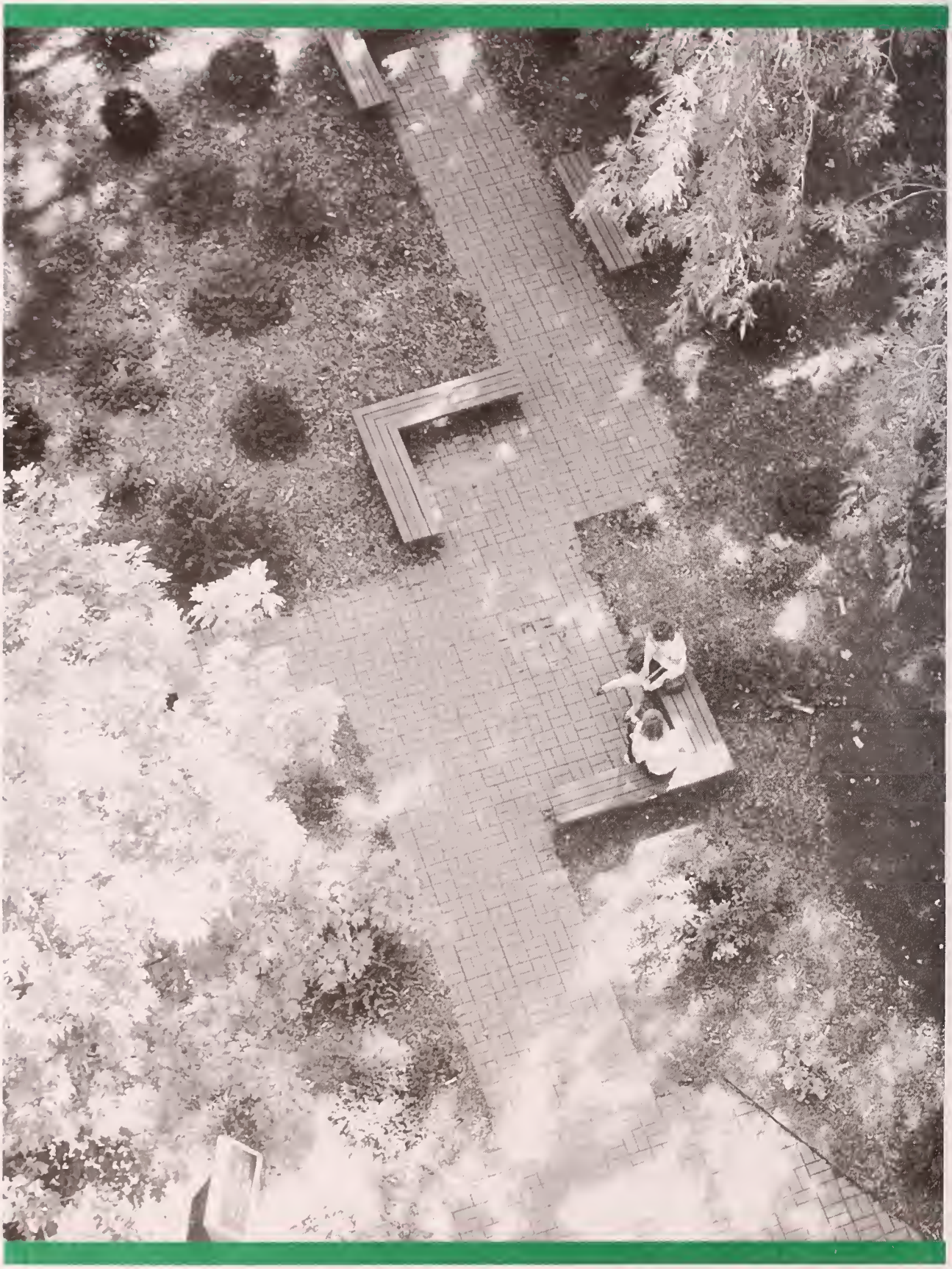
Exceptions may he made regarding length of appointments, if so awards will be prorated. Graduate Assistants are not entitled to any fringe benefits including unemployment insurance at the end of their contract.

Load and Academic Requirements to Maintain Assistantship

- Graduate Assistants must carry a load of six semester hours of graduate work per semester in their program, which is considered full time. Overloads may be petitioned to the Dean
- Graduate Assistants must maintain a GPA of 3.5 in their academic work
- Graduate Assistants are required to work 20 hours per week, which is considered a full-time work schedule
- Graduate Assistants are not allowed to secure a second position on campus

For application process and appointment procedures contact the Graduate Office.

Undergraduate Academic Policies and Procedures



All students at FSC are expected to be familiar with and act in accordance with the academic policies and procedures. The policies are interpreted and administered by the Vice President of Academic Affairs, who also reserves the right to grant exceptions to them. Students acting outside of these policies may be subject to administrative action. Special consideration may be given to students admitted or later identified as physically handicapped, learning disabled, or economically or educationally disadvantaged.

For the following policies, ***Grade Point Average*** *(GPA) is the average of grades earned during one semester.* ***Cumulative Grade Point Average*** *(cumulative GPA) is the overall average of grades received to date. Averages are computed through quality points to account for credit differences as explained in the Grading Policy section of the catalog.*

General Course Requirements

To fulfill requirements for a Bachelor's Degree, students must complete the requirements of the Liberal Arts and Sciences Program (explained in the Curriculum section of catalog) as well as the requirements designated for completing their major.

The Major

Undergraduate degree candidates must declare and complete a major in one program of study offered by the college. Requirements for undergraduate majors are described in the Undergraduate Day and Undergraduate Evening Program sections.

Declaring a major

Students may declare a major when they are admitted to the college. If a change of major is desired, students must complete a change of major card available in the Registrar's Office.

Pre-Majors (undeclared)

Students with 60 semester hours of college course work must apply for and be admitted to a major prior to registering for additional courses.

Transfer students with 60 or more credits when admitted as "Pre-Majors" have until either October 1 or March 1 of their first semester at Fitchburg State College to declare their major.

Requirements for a Major

A 2.0 cumulative GPA and 2.0 GPA in courses in the major are the minimum requirements for both admission to and completion of all major programs. Some majors, however, may have requirements higher than a 2.0 GPA in major courses for either entrance or completion.

Dismissal from a major

Students not making satisfactory progress in completing the academic requirements of the major may be asked to select another major.

Professional programs of study may require a departmental review of each student to determine if they are qualified to continue in the major. If in the review process the student is judged as unsuitable for the profession, regardless of academic standing, the student may be asked to select another major.

Successful completion of an academic program in any major field or professional program does not obligate the faculty to recommend licensure or certification, even if the candidate is awarded the academic degree.

Grading Policy

Grades are awarded on a numerical scale as follows:

4.0	A	Excellent
3.5	B+	Very Good
3.0	B	Good
2.5	C+	Above Average
2.0	C	Average
1.5	D+	Below Average but Passing
1.0	D	Well Below Average but Passing
0.0	F	Failing
	IN	Incomplete
	W	Withdrawn
	AU	Audit
	S	Satisfactory
	U	Unsatisfactory

All grades except 0.0, U, IN, W, and AU are passing grades and earn credit towards the degree.

Computing quality points and cumulative GPA

- Quality Points = semester hours (s.h.) carried by the course multiplied by numerical grade. *(For example, a three credit course with a grade of 3.0 would earn nine quality points.)*
- Cumulative grade point average = total quality points earned in all courses divided by total credit hours completed

Repeating Classes and Grade Substitution

- Courses in which passing grades have been earned may **not** be repeated for credit. A student is able to repeat a course only if the assigned grade was 0.0, U, or AU
- If the class is repeated, the new grade will be substituted for the original failing grade in calculating the student's cumulative GPA. The original failing grade, however, will continue to appear on the transcript.
- A new passing grade earned as transfer credit also eliminates the original failing grade in calculating the cumulative GPA, but the new grade is not itself calculated into the cumulative GPA.

Satisfactory and Unsatisfactory Grades

- S/U grades are awarded to students who register for courses that have departmental approval to offer these grades and have been listed as such with the Registrar.
- S indicates that a student has passed the course with the minimum requirements.
- No quality points are awarded with the S or U grade.
- Students may opt to receive an S/U grade in an eligible course. This option must be recorded with the Registrar by the end of the Add/Drop deadline. Once recorded, the designation cannot be changed. (Courses designated as "S/U grade only" need not be recorded with the Registrar.)
- S/U grades are not an option if the course is a requirement for a major or minor program of study, unless the course has been approved by the department as an S/U course for majors or minors.
- Students may take a maximum of one course per semester for S/U credit, and a maximum of 12 semester hours of S/U credit towards the degree.
- No more than two courses can be taken for S/U credit in any department, unless such courses are required by the degree program in which the student is enrolled.
- The S/U option may not be used to satisfy the writing course requirement or the mathematics proficiency requirement. It also may not be used to satisfy more than one course requirement for each of the Liberal Arts and Sciences clusters.

Incomplete

- An Incomplete (IN) is given in lieu of a grade if a student has successfully completed at least 80% of the required course work but cannot complete the rest due to illness or equivalent disability.
- Students must complete the required course work by the end of the **fourth week of classes** of the following semester in order to receive a grade; otherwise the IN is automatically changed to a grade of 0.0.
- While an IN is not counted in determining academic status, it may impact eligibility for financial aid and athletic participation.
- Grades that result from the fulfillment of an IN will not change a Probationary, Suspension, or Dismissal status, nor will they count towards Dean's List or President's List eligibility.

Audit

- An Audit (AU) is entered into the transcript to indicate that a student has been officially enrolled in a course for neither grade nor credit.
- Students who wish to audit a course during the day must record the audit designation with the Registrar's Office by the end of the Add/Drop period.
- Students who wish to audit a course during the evening must register the audit designation with the Division of Graduate and Continuing Education before the third class meeting.

Withdrawal from a Course

- If a student officially withdraws from a course by the end of the eighth week of classes, or prior to the seventeenth class hour for special scheduling classes in Continuing Education, a W (Withdrawn) is entered into the transcript. No credit is awarded for the course, and it does not affect the cumulative GPA.
- If the student officially withdraws after the end of the eighth week of classes, the grade of 0.0 is entered into the transcript. A waiver is sometimes granted for documented, critical extenuating circumstances.

Transcripts

Transcripts are prepared upon submission of a transcript request form. Please include your social security number and degree area. Transcripts are free of charge.

To obtain a transcript write to:

Office of the Registrar
Fitchburg State College
160 Pearl Street
Fitchburg, MA 01420-2697

Attendance

Each instructor has the prerogative to place a value upon class attendance and must inform the class of that value early in the semester. The instructor's class attendance standard should be stated in the course syllabus. If a student is absent from a class meeting, the student is required to produce appropriate documentation for the instructor's review.

Section 2B of Chapter 151c of the General Laws of the Commonwealth of Massachusetts reads as follows:

Any student in an educational or vocational institution, other than a religious or denominational educational or vocational training institution, who is unable, because of religious beliefs, to attend classes or to participate in any examination, study, or work requirement on a particular day shall be excused from any such examination or study or work requirement, and shall be provided with an opportunity to make up such examination, study, or work requirement which may have been missed because of such absence on any particular day; provided, however, that such makeup examination or work shall not create an unreasonable burden upon the school. No fees of any kind shall be charged by the institution for making available to the said student such opportunity. No adverse or prejudicial effects shall result to students who avail themselves of the provisions of this section.

Academic Standing

All courses completed at Fitchburg State College, including those taken during intercession or summer session, determine current academic standing. The grades and credit for intercession courses are included in the following spring semester's GPA and for summer session courses in the following fall semester's GPA.

Credits transferred from another institution are applied to a student's total number of credits earned, but grades earned from transferred credits are not calculated into the cumulative GPA.

Good Academic Standing

To achieve good academic standing, you must:

- Maintain an overall cumulative GPA of 2.0 or higher
- Maintain a cumulative GPA of 2.0 or higher in your major
- Meet any additional requirements of your major which have been approved by the All-College Committee and are consistent with college policy on affirmative action

Honors

Fitchburg State College honors students who have high academic achievement throughout their college career as well as at graduation. The honors are:

President's List

Honors students for consistently high academic achievement. Students are named to the President's List when they have attained a semester average of 3.75 or higher for three successive semesters while maintaining full-time status.

Dean's List

Honors students who have attained an average of 3.2 or better for the semester while maintaining full-time status

Summer Dean's List

Honors students taking 12 semester hours or more through the Continuing Education division during the summer sessions who maintain an average of 3.2. These students can be named to the President's List if they meet the specified cumulative average.

Graduation Honors

Graduation honors recognize outstanding academic careers as signified by a high cumulative average. To graduate with honors, a student must have completed **at least 60 credits** with a numerical grade at the College.

Summa Cum Laude honors students who graduate with a cumulative GPA of 3.8 or higher.

Magna Cum Laude honors students who graduate with a cumulative GPA of 3.5 to 3.79.

Cum Laude honors students who graduate with a cumulative GPA of 3.2 to 3.49.

Special Distinction is given to students who have completed the Honors Program and a senior thesis.

Probation

If a student's cumulative GPA falls below 2.0 at the end of any semester, that student will be placed on probation. **To avoid suspension the student must meet the following criteria:**

- A student on probation, who has attempted less than 33 semester hours and who has maintained a cumulative GPA of 1.6 or higher for two semesters, may enroll for a third semester to improve academic standing.
- A student on probation, who has attempted 33 to 59 semester hours and who has maintained a cumulative GPA of 1.8 or higher for four semesters, may enroll for a fifth semester to improve academic standing.
- A student, who has attempted 60 semester hours or more, must maintain a GPA of 2.5 or higher for every semester while they remain on probation.

Students on probation must:

- Meet with their department advisors before the start of the second week of each semester to review current course load and arrange periodic meetings throughout the semester
- Contact the Academic Advising Center during the first two weeks of the semester
- Utilize the many resources the college offers, including faculty, Counseling Services, Academic Success Center, PASS Program, Expanding Horizons, Career Services, and other support systems, as needed

Students placed on probation for the first time will remain eligible to:

- Hold elected or appointed office
- Serve on campus committees
- Participate on athletic teams (provided academic progress meets the criteria in Section 1)

Any additional probations will disqualify a student from eligibility for these activities.

Students who voluntarily withdraw from the college while on probation will remain on probation if they are readmitted.

Students who maintain the college's academic standards for probation must also meet the financial aid and athletic's eligibility requirements for satisfactory academic progress. (Financial aid and athletics have additional academic requirements for probationary students. Students should consult the appropriate office to determine their eligibility.)

Suspension

Students will be suspended if they have spent at least one semester on probation and do not meet the following GPA and credit criteria:

- A student who has attempted less than 33 semester hours and has a cumulative GPA below 1.6 after two semesters will be suspended at the end of their second semester
- A student who has attempted 33-59 semester hours and has a cumulative GPA below 1.8 after four semesters will be suspended at the end of their fourth semester
- A student who has attempted 60 or more semester hours must maintain a 2.5 GPA each semester until they are removed from Probationary status

Suspended students are not eligible to enroll in any credit course in any division of Fitchburg State College for at least one semester.

Following suspension, students must submit a letter requesting re-admission before the deadline established by the Registrar. Students who are readmitted after a suspension will continue on probation.

Suspension status is not changed by a voluntary withdrawal.

Dismissal

Once students have been readmitted after a suspension, they must meet probationary standards for enrollment to avoid dismissal.

Dismissal status results in permanent dismissal from all divisions of Fitchburg State College. A dismissed student may not enroll in any credit courses in any division of the college except under the provisions of the Credit Elimination Policy.

Credit Elimination Policy

The Credit Elimination Policy applies to students who leave the College and desire to return after five or more calendar years. Such students may eliminate all or part of previously earned credits from their transcripts, in units of one semester or more. When a particular semester of credit is designated to be eliminated, all credits from this semester must be eliminated.

This policy requires that:

- Credit elimination may only occur once
- A request for credit elimination must be in writing
- The Dean of Undergraduate Programs must approve the request

Transfer Credit

Credit received for courses completed at other regionally accredited institutions of higher education may be transferred to Fitchburg State College and applied towards degree programs if:

- The courses are equivalent to courses offered by Fitchburg State College or appropriate to programs at Fitchburg State College
- The grade received was at least a 2.0 or higher

Credit for courses transferred with passing grades below 2.0 may be approved in exceptional circumstances or if the credits are included as part of an Articulation Agreement/Associate's Degree program covered by the Commonwealth of Massachusetts Transfer Compact or the Joint Admissions Program.

Value of transferred credit

- Transferred credit counts only as credit hours earned
- No quality points or grades are transferred or calculated in the student's cumulative GPA
- A minimum of 45 semester hours towards a baccalaureate degree must be completed at Fitchburg State College
- No more than 50% of major credits and 50% of minor credits can be completed as transfer credits
- Major departments may have additional requirements

Approval of transfer credit may be authorized by the Registrar, the Dean of Undergraduate Programs, and the Dean of Graduate Programs.

Academic Dishonesty Policy

Academic dishonesty in all its forms, including cheating, fabrication, plagiarism, and the facilitating of academic dishonesty by aiding and abetting any of the aforementioned, is not tolerated at Fitchburg State College. Violators will be subject to the following process.

Step One Procedures

- Within ten days of the discovery of the alleged offense, the faculty member involved will contact the student, inform him/her of the circumstance in question, and arrange a meeting to discuss it.
- If the faculty member finds the student responsible for the alleged behavior he/she will write a statement, either during the meeting with the student or within seven days of it, indicating the alleged dishonesty, his/her judgment regarding it, and the sanctions, if any, to be imposed.
- If the student is found not responsible, they will be notified in a statement written by the faculty member as described above.
- The student will sign the statement, indicating either that he/she accepts the outcome or that he/she has seen the statement but does not accept the outcome. The student gets a copy of this statement, and the faculty member retains the original as part of his/her records for the class.

Students found responsible for the alleged behavior based upon the evidence presented may be subject to one or more of the following sanctions by the faculty member:

- Be required to complete additional course requirements; this may include repeating part or all of the work in question.
- Receive a grade of 0.0 for the work in question.
- Receive a grade of 0.0 for the course
- Be referred to the department chairperson for transmittal of the case to the Committee on Academic Dishonesty. If the referral is made at a time when a grade is due to the Registrar, the faculty member will submit an Incomplete for the student.

Step Two

When the faculty member has taken the action described under #4 above, the chairperson will submit the case to the Committee on Academic Dishonesty. By doing so the faculty member agrees that the disposition of the case, including the imposition of any actions, will be determined by the Committee. Once a case is referred to the Committee on Academic Dishonesty, the procedures and timelines of the Student Judicial Code apply.

The Academic Dishonesty Committee is composed of two faculty members appointed for a one-year term by the MSCA faculty union, two student members of the Student Judicial Board, and an administrator from the Office of Academic Affairs, who will chair the committee.

Step Three

When the student feels that the accusation made and/or the sanctions imposed by the faculty member are unfair, he/she may take the case to the department chairperson. The chairperson will arrange a meeting with the student and the faculty member both present. Within ten days of this meeting, the chairperson will notify the student and the faculty member in writing of his/her opinion on the case.

If the student is dissatisfied with the outcome of an appeal to the chairperson, he/she may appeal the case to the Committee on Academic Dishonesty. This process is initiated by contacting the Dean of Undergraduate Programs or another administrator in the Office of Academic Affairs.

Cases may be referred directly to the Committee when the student(s) accused of academic dishonesty is not in the class of the discovering faculty member or when students want to bring a case against other students.

Students found **responsible*** for the alleged behavior by the Committee may be subject to the following actions:

- Have the sanction(s) imposed by the faculty member lessened
- Have the sanction(s) imposed by the faculty member upheld
- Receive a grade of 0.0 for the work in question
- Receive a grade of 0.0 for the course
- Be required to perform some kind of service to the college community
- Be referred to the President of the college with a recommendation of Suspension
- Be referred to the President of the college with a recommendation of Expulsion

Students found **not responsible** for the alleged behavior by the Committee will be recompensed in one or more or all of the following ways:

- All work which had been in question will be accepted;
- The sanction(s) imposed by the faculty member will be removed.

An opportunity to redo part or all of the assignment or exam in question will be granted when the Committee has found that a seeming act of academic dishonesty was unintentional and the result of a lack of understanding of proper procedure.

* Rules of Evidence do not apply in college hearings. Evidence "beyond a reasonable doubt" is not necessary for a student to be found responsible. The Committee will be asked to determine, from the case presented by both sides, which side has more evidence to support it.

Undergraduate Day Policies and Procedures

Course Registration

Approval of Course Schedule

Prior to course registration each semester, students must meet with their advisor to review their academic progress and to develop a course schedule for the upcoming semester. Advisors must approve course selections before the student is permitted to register.

Identification of Class Standing

For the purpose of registration and financial aid, the following classifications are identified:

Freshmen ..... students with between 0-24 earned credits
Sophomores ..... students with between 25-48 earned credits
Juniors ..... students with between 49-72 earned credits
Seniors ..... students with 73 or more earned credits

Add/Drop

During the first five class days of the semester, students may either add or drop a course; during the sixth class day, students may only add courses. Although students may make changes to their schedule during the Add/Drop period without the approval of their advisor, they should confer with their advisor when making changes that affect their progress towards graduation or fulfillment of their major requirements.

Course Withdrawal

Through the eighth week of the semester, students may withdraw from courses and receive a W (Withdrawn). Appropriate forms are available at the Registrar's Office and must be signed by the course instructor, the faculty advisor, and, if the student is dropping below 12 semester hours, the Dean of Undergraduate Programs. Withdrawal after the eighth week results in a grade of 0.0.

Course Load

Graduation requirement: a minimum of 120 semester hours in all majors (See Undergraduate Day Programs)

Full-time status: a minimum of 12 semester hours each semester Students must maintain full-time status to remain eligible for financial aid, varsity athletics, academic honors, including Dean's List, participation in student governance, VA benefits, scholarships, and health insurance coverage. Both day and continuing education courses are included in calculating total semester hours.

Maximum allowable course load: 18 semester hours
Students registering for more than 18 semester hours (whether solely at Fitchburg State College or in conjunction with courses taken at another college) must have the permission of the Office of Academic Affairs along with their major advisor. A student with a cumulative GPA below 3.0 will normally not be granted permission to register for more than 18 semester hours. Students taking overloads without permission may be denied credit for overload courses, regardless of grades earned.

Four-year undergraduate degree: at least 15 semester hours per semester are recommended for graduation in four years. Certain majors may require enrollment in specific courses or with specific course loads in certain semesters; students are responsible for understanding requirements for their major.

Program enrollment: Under certain circumstances, day program students may be permitted to enroll full time for a semester through the Continuing Education programs, and vice-versa. Approval for such enrollments must be granted by the Dean of Undergraduate Programs or the Director of Continuing Education, as appropriate.

Withdrawal from the College

Students who withdraw from the college, either during or between semesters, must complete a withdrawal form available at the Student Affairs Office. Students who withdraw within the first eight weeks of the semester will receive a "W" in each course.

Students who leave the college after eight weeks of the semester will receive a grade of 0.0 or "U" in all their courses unless granted a waiver by the Dean of Undergraduate Programs for documented extenuating circumstances.

Students withdrawing in good standing may apply for readmission to the Registrar before May 1 for fall semester or November 1 for spring semester. Readmission is not guaranteed. The Registrar will consider academic, financial, and college discipline records, in addition to space available, when granting readmission.

Undergraduate Evening Policies and Procedures

Course Registration

Students must register for courses within the curriculum requirements as set in the College Catalog of the year of matriculation. However, it is the right of the college to alter the requirements to meet statutory, educational, or professional standards.

For regularly scheduled courses, students must register before the second class meeting. Early registration is recommended for all matriculated students and applicants in order to secure seats in the courses needed to proceed in degree programs. The regular registration period ends two weeks prior to the start of the semester, with "late registration" and late charges commencing thereafter. Please refer to the semester course bulletin for specific registration dates.

Senior Level—Graduate Credit Policy

A senior level student (90 semester hours or more) with a 3.5 GPA or better may register for Graduate credit courses at the 6000 level and above with the following restrictions:

- Approval must be obtained from the Graduate Dean or designee
- Combined Graduate and Undergraduate credit load in a semester is not more than 15 hours
- No more than three Graduate credits may be taken in a semester
- Recommendation of the appropriate Undergraduate Advisor and Registrar must be submitted to the Graduate Dean for approval
- No more than nine semester hours of Graduate credit may be accumulated by a senior. Graduate credits are applicable to maintain full-time status to receive financial aid
- Graduate courses taken towards undergraduate degree requirements cannot be transferred into a graduate program at Fitchburg State College

Scheduling of Courses

The Division of Graduate and Continuing Education schedules courses at times that are convenient for working adults. Most courses are offered in the late afternoon or evening; some courses are scheduled on weekends. Winter session and summer session courses are scheduled during mornings, afternoons, or evenings.

Course Load

Fall and spring semesters: Maximum academic load is nine credit hours.

Winter session and summer session: Maximum academic load is six credit hours.

Any student registering for credit beyond the normal load must submit a written request seeking approval from the Dean of Graduate and Continuing Education prior to registering by submitting an academic petition waiver form.

Course Changes

Changes to courses must be made before the second meeting. No change in credit is permitted after the second meeting. After the start of the second class meeting, the dropping of a class is considered a withdrawal.

Course Withdrawals

Withdrawals may be made prior to the eighth class for regularly scheduled courses and prior to the eighteenth class hour for special scheduling courses or institute courses without academic penalty. Course withdrawal is initiated by calling the Graduate and Continuing Education Office, or by visiting that office in the Sanders Administration Building. In either case, the student must receive a confirming copy of the completed Course Withdrawal Form. Any student who withdraws by simply not attending classes automatically receives a failing grade for the course.

Student Grievance

A student who is dissatisfied with a grade received or with any other aspect of instruction in a particular course is to confer with the Instructor, who will explain the reasons for awarding the grade. If such a conference fails to achieve a satisfactory resolution, the student may then appeal in writing to the Dean of Graduate and Continuing Education to adjudicate the situation.

Cancellation of Courses

The College may cancel courses for insufficient enrollment or for other reasons deemed to be in the best interest of the college. Students who sign up for a course which is canceled may transfer to another course or receive a full refund of tuition and fees.

Withdrawal from the College

A matriculated undergraduate student may initiate withdrawal from the college by completing an academic petition form obtainable through the Division of Graduate and Continuing Education. A student who does not register for a course for two years is automatically withdrawn. If the matriculated student decides to return to FSC, they need to initiate readmittance through the Registrar's Office.

Student Support Services

Fitchburg State College is committed to the academic success of its students. Several programs are available to advise, assist, and guide students, including individual advisors, the Academic Advising Center, and the Academic Success Center. Students are encouraged to consult with any or all of these programs throughout the academic year.

Academic Advising

The Advisor is a critical resource for all students during their academic career. Every student is assigned a faculty advisor. The advisor fulfills many important functions for a student, including:

- Being the primary resource in the planning of a course schedule each semester
- Advising students regarding any problem or concern involving their academic program

Advisor Availability

Undergraduates

All faculty have at least three office hours during the week set aside for meetings with their students. Hours are posted on doors of faculty offices, in the office of secretary of the major department, and are also available through the Office of Academic Affairs.

Graduate and Continuing Education students

For general advising purposes faculty advisors are available each night, Monday through Thursday, during the semester. Appointments with advisors for general advising are made through the Office of Continuing Education.

Academic Advising Center

The Academic Advising Center specializes in assisting undergraduate day students who:

- Have not declared a major (31-60 credits)
- Are nontraditional
- Are experiencing academic difficulty
- Are needing help in interpreting specific academic regulations

The Center is staffed by two full-time administrators chosen for their specific expertise in assisting students to make the best possible use of their academic experience.

The Advising Center, located on the third floor of the Hammond Building, is open during the fall and spring semesters and is supervised by the Associate Vice President for Academic Affairs.

Academic Success Center

The college maintains a group of centers whose purpose is to assist those students who wish to increase their proficiencies in reading, writing, or mathematics; or who wish to sharpen their overall study skills. The centers are located on the third floor of the Hammond Building.

Mathematical Skills Center

The Mathematical Skills Center under the direction of the Mathematics Department, provides peer tutoring to all college students on a drop-in basis. Assistance is available in most areas of mathematics from arithmetic to calculus.

Writing Skills Center

The Writing Skills Center offers help for all types of writing problems, from planning to punctuation and proofreading. The English Department operates the Writing Skills Center, which is staffed by both faculty and peer tutors. Any instructor at the college may refer a student to the Writing Skills Center, and any student, who desires to take advantage of the many programs and materials, may do so by simply applying.

Reading Center

The Reading Center recognizes that all students read at different skill levels and caters its programs to meet individual needs. The Center offers one credit electives that can be taken for up to three semesters. These courses provide:

- Enrichment programs for students who want to increase reading speed while maintaining good comprehension
- Programs for students who want to build stronger vocabularies
- Comprehension exercises to help students better understand what they read
- Methods to adjust reading speeds to meet particular needs

Study Skills Center

The Study Skills Center offers services for students wishing to review or sharpen their study skills, as well as services for students who wish to develop a system of successful college-level study practices. The Center offers assistance in these areas:

- Time management skills
- Learning styles
- Listening and note-taking techniques
- Concentration and memorization tips
- Test-taking skills

PASS (Peer Assisted Study Sessions)

Students who need help preparing for exams, quizzes, and homework assignments are invited to take advantage of study sessions taught by their peers. Peer Assistants provide guidance for:

- Note taking
- Study strategies
- Organizational skills
- The development of study groups
- Academic support of freshman and introductory level courses
- Tutorial software available from the campus network and the Internet

A listing of the courses being supported each semester is available from the Academic Success Center. Announcement in classes will be made by faculty teaching the selected courses.

Pre-Major Student Services (Undeclared Students)

We are committed to assisting Pre-Major students in an effort to encourage academic and career exploration. The college has many resources including:

- Humanities Department Advisors, 0-30 credits
- The Academic Advising Center, 31-60 credits

Pre-Major students also work closely with other support departments on campus, including:

- Career Services
- Expanding Horizons
- The ACCESS Program

Students are encouraged to speak with faculty and departmental chairs, experience introductory courses and attend departmental workshops.

The ACCESS Program

The ACCESS Program is a highly successful academic support program designed to meet the needs of undergraduate students from low-income backgrounds. The students who participate in ACCESS possess the motivation and potential to receive a college education but have been denied access to a quality education because of educational or economic disadvantages. The ACCESS Program provides students with:

- One-to-one advising
- Assistance with study skills
- Tutoring in a wide variety of courses
- Help with reading, writing, and mathematics
- Counseling on a variety of financial, social, and personal concerns

The ACCESS staff maintains an open door policy for academic counseling and advising. Through referrals, the staff involves students with many other college faculty and staff who possess the special skills needed to help students cope with academic, financial, social, and personal concerns.

The ACCESS Office also serves as a resource to the college community on various issues such as minority student development, Black History Month, Latino Awareness Month, and the following student organizations:

The Black Student Union

The Latin American Student Organization

The Iota Phi Theta Fraternity, Inc.

The Phi Beta Sigma Fraternity, Inc.

The Zeta Phi Beta Sorority, Inc.

The ACCESS program serves Massachusetts residents who meet one of the following criteria:

- The first person in the family to attend college
- Family income less than $25,000 per year
- Attendance in a public high school located in or near Boston, Lawrence, Lowell, Springfield, or Worcester
- Participation in academic programs such as Upward Bound, Talent Search, METCO, or Urban Scholars
- Receives public assistance

When applying to the college, students interested in the ACCESS Program should place a check mark in the box next to 'ACCESS Program' on the Student Profile of the application. The college encourages students and parents to visit the campus and talk with the staff about the program.

The ACCESS Office is located in room 320 in the Hammond Building and the telephone number is 978-665-3399.

Expanding Horizons

Expanding Horizons is a student support services program designed to promote the academic success of FSC students who are from low income backgrounds, families where neither parent has received a baccalaureate degree, and/or students with disabilities. Funded by the federal government, Expanding Horizons is part of the nationwide network of TRIO Programs, established over thirty years ago, that have helped an estimated 2 million students to enter and graduate from college despite barriers due to race, ethnic background, socio-economic circumstances, or disability.

Expanding Horizons at FSC provides the following programs and services for Freshman and Transfer students:

- Pre-semester Orientation Week—a residential orientation program to ease to adjustment to college and get a jumpstart on academic preparation
- Faculty/Peer Mentor Families
- A one credit academic survival course
- Academic Needs Assessment

For all Expanding Horizons students:

- Expanding Horizons Planbook and Career Portfolio—a unique guidebook to the four year college experience and a skills based portfolio for use in career development and lifelong learning
- Group and Individual Study Skills Training
- College 102—Academic Survival Class

- Academic, Career, and Personal Counseling
- Learning Specialist Support
- Social and Cultural Activities
- Junior/Senior Seminar—preparation for graduate school and the transition to work

To be eligible for Expanding Horizons, a student must be a citizen or national of the United States or meet the residency requirement for federal financial assistance; be enrolled or accepted for enrollment at Fitchburg State College and:

- Meet federal low income guidelines
- Be first generation to college (neither parent has achieved a baccalaureate degree)

And/Or

- Be a person with a disability

For further information or to be a participant in the Expanding Horizons Program come to our office on the third floor of the Hammond Building or call 978-665-3064.

International Education Office

Fitchburg State College encourages a global perspective on campus by promoting programs for international students as well as for students who want to study in another country. Both types of students enrich the cultural and ethnic diversity of the college community. The International Education Office benefits foreign students, those who wish to study in another country, and those who are interested in an on-campus international experience.

Services offered to international students include assistance with their transition to college, cultural awareness programs, and guidance when completing the necessary paperwork and communications with the United States Immigration Service.

Fitchburg State College encourages students to consider a semester or a year of study in another country as part of their educational experience. The college has established a number of direct exchange programs with colleges and universities throughout the world. Students also have the choice of applying for international programs not identified by the college. For specific information about international study possibilities, contact the Office of International Education, 3rd Floor, Hammond Building, 978-665-3089.

Students interested in an on-campus international experience have the opportunity to request an international roommate or join ISU (International Student Union), a student-run organization that welcomes incoming international students to campus.

Disability Services

Disability Services is the primary support system for students with disabilities taking classes in the day and evening division. A number of services are available including an adaptive computer lab, tutors, peer mentoring, tape recorders, testing accommodations, note takers, readers, interpreters, support groups, coaching, and consultation with faculty. The adaptive computer lab houses a voice activated computer system, Braille printer, scanner with print recognition, screen enlargement programs, a closed circuit television for the visually impaired, speech synthesizers, and screen reading programs. Disability Services and the Assistive Technology Lab are located on the third floor of the Hammond Building. Contact Mary Wagner at 978-665-3427 or 978-665-3575 TTY for more information.

Academic Accommodations

All accommodations are provided based upon assessment of individual need. Students desiring an accommodation that will enable them to fully participate in academic or campus activities should follow these procedures:

- Submit the appropriate documentation to the Office of Disability Services from a certified diagnostician
- Meet with the Staff of Disability Services
- Complete an accommodation sheet
- Submit the completed accommodation sheet to the appropriate department

Testing Accommodations

Students with disabilities needing testing accommodations for placement exams or other standardized tests must submit requests for accommodations to the Office of Disability Services at least one week prior to the test date. Extended-time, out-of-classroom testing, oral exams, and other alternative testing are options offered to students with disabilities.

Reduced Course Load

Waivers may be available to students with disabilities who need the accommodation of a reduced course load. Waivers are granted by the Dean of Curriculum and Instruction. Students with disabilities needing the accommodation of a reduced course load will not be penalized by Financial Aid or Housing.

Center for Leadership and Peer Education

The Center for Leadership and Career Education is a three-year grant funded by the U.S. Department of Education to serve college campuses and high schools in Massachusetts.

The main components include:

- Training and technical assistance to campus service providers and employers in areas such as; creating partnerships, disability law, reasonable accommodation, disclosure of disability, and assistive technology
- Leadership and peer education programs designed to emphasize empowerment through the experience of leadership and self-advocacy by the student, and for the community of students with disabilities in high schools and on college campuses in Massachusetts.
- Career development programs to promote career services for students with disabilities during their post secondary experience and into the workplace by using the Career Planbook and Portfolio (authored by Willa Peterson, Expanding Horizons, and Doug Sherman, Career Services.)

- Provide technical assistance and training in the leadership model and in the development of peer mentor programs to be implemented in high schools and for incoming college freshman and transfer students (in collaboration with the Massachusetts Institute for Community Inclusion at Children's Hospital).

Located in the Industrial Arts Building; Rooms 220/221

For more information contact:

Debra Roberts
978-665-3466v
978-665-3464tty
droberts@fsc.edu

Career Services

The Career Services Center provides a variety of programs and activities to assist students in their career development and job hunt. Students are encouraged to increase both their self-understanding and their effectiveness in making and implementing career decisions. Career Services offers appropriate services for all stages of a student's career development at FSC, from selecting a major to job hunting and preparing for professional interviews.

Among the services provided are:

- **Career counseling,** vocational testing, seminars, workshops, and outreach programs on career planning and job search strategies, and resume and interviewing critiques.
- **Sigi Plus,** a computerized career exploration system
- **The Career Library,** housed within the Career Center, is an extensive collection of career information, including company and organizational directories, graduate school guides, and labor market information. Also available are various employer databases and access to the Internet. Handouts are available on a variety of career exploration and job search topics.
- **The "ACE" Network,** an alumni network, provides students with the opportunity to contact professionals working in a particular field. Alumni are invited to campus to discuss various career paths in the "Pizza Panel" series. The Extern Program matches students with alumni for a visit to their workplace during class breaks.
- **The FSC Job Tracker,** a biweekly publication of the Center, lists internship opportunities and current full-time professional jobs at both the entry and more experienced levels. Listings of local part-time positions are also maintained. A regular newsletter called *The Career Connection* highlights upcoming activities and other career information.
- Several national programs of **standardized testing** are administered through the Center including the Graduate Record Examination (GRE), College Level Examination Program (CLEP/DANTES), and the Miller Analogies Test (MAT).

The Career Services Center is a resource for all matriculated Fitchburg State College students and all alumni. The Center is located on the third floor of the Hammond Building and is open from 8:30 am to 7:00 pm on Monday and Wednesday, and 8:30 am to 5:00 pm other weekdays. Students may stop in during these hours to use the resources or may make appointments for career counseling or other services by calling 978-665-3151.

Counseling Services

Counseling Services provides confidential short-term counseling to all full-time undergraduate students at no charge. Counselors are available for individual counseling, group and couples counseling, crisis intervention, educational programming, outreach workshops, community referrals, and inservice training.

Counselors are frequently consulted for a number of reasons including:

- Coping with loss
- Relationship concerns
- Loneliness/home sickness
- Low self-esteem
- Inability to concentrate
- Family problems
- Sexuality issues
- Roommate difficulties
- Alcohol/drug abuse
- Stress
- Sexual abuse
- Developing healthier habits
- Eating concerns
- Academic difficulties and learning problems
- Feelings of depression, anxiety, and/or insecurity

Group counseling is offered for Adult Children of Alcoholics, Survivors of Past Sexual Trauma, Relationship Issues, Women's Support Group, Stress Management, Eating Disorders, Assertiveness, and Self Esteem.

Counseling Services coordinates a variety or programs allowing students to educate fellow students in the areas of alcohol and substance use, HIV and AIDS awareness and sexual assault and other violence prevention. These programs include an interactive theater group, Absolute Reality Productions, which uses drama to inform students about these issues and others that college students face. Also included is the Mentors for Violence Prevention (MVP) program which educates students about violence in our society. These programs also are presented to high school students and community groups.

The Counseling Center is located on the third floor of the Hammond Building. The hours are 8:30 am to 5:00 pm, Monday through Friday, as well as selected evening hours by appointment. Appointments can be made by students in person or over the telephone. Students can see a counselor without an appointment during the daily drop-in time, which is from 2:30 pm–3:30 pm. Drop-in visits are usually 15-20 minutes and can be used for evaluation, to discuss programming, to obtain a referral to a therapist off campus, or to talk something over with a counselor.

Counseling Services provides 24 hour emergency service to the college. The counselor on call can be reached through Public Safety or a Resident Director or Resident Assistant.

Student Health Services

Student Health Services provides ambulatory care and health education/promotion, and maintains health records for all full-time undergraduate students at the college. Services include:

- Emergency care of acute illness and injury
- Evaluation, treatment, and/or referrals
- Immunization programs
- Preventative care
- Allergy injections in conjunction with the student's personal physician

Health care is given by nurse practitioners and a consulting physician. The physician attends the clinic during the week at scheduled times and is also available by telephone for consultation. A laboratory facility is available for minor tests free of charge. Outside laboratory services are available for a fee. Some equipment is available to borrow on a limited first-come, first-served basis.

All students are required to have a physical examination within a year of admission to the college. (Transfer students may submit a copy of their physical exam from the school they previously attended.)

Every full-time student or student in a Health Science program, must present a physician's certificate within ten days of entering the college as proof that they have received the following immunizations:

- A booster dose of TD within the past ten years
- At least one dose of mumps and rubella vaccine(s)
- Two doses of live measles vaccine given at least one month apart beginning at or after 12 months of age or laboratory evidence of immunity
- Tuberculosis test or chest X-ray results (within past one year)

Health Services is located in the Anthony Building (opposite Public Safety in the quad). Walk-in hours are available daily or students may schedule appointments.

Substance Awareness/ Smart Choices Office

The Substance Awareness Office manages the campuswide alcohol and drug prevention effort and provides a range of supportive and educational services. The Office's major responsibilities include:

- Organizing a campuswide Substance Awareness Task Force
- Conducting yearly campus research
- Facilitating educational workshops and training
- Conducting individual assessments and referrals
- Running the Smart Choices Program

The Smart Choices Program consists of alternative (nonalcoholic) activity planning, cosponsorship of campuswide awareness events such as Alcohol Awareness Week, AIDS/HIV Awareness Day, and the Health Fair, and the coordination of the Smart Choices Peer Educators. The student volunteers are trained to work within the campus community to raise awareness of the issues surrounding alcohol usage and AIDS/HIV and to address how these issues impact the campus environment.

McKay Curriculum Resource Center

The McKay Curriculum Resource Center provides faculty and students in Education Programs assistance in the research and development of curriculum materials, motivational tools, and evaluation and assessment devices. The Center houses textbooks, instructional aids, media materials, and computer software, which may be used in the classrooms at the elementary and secondary levels.

Child Development Center

The Fitchburg State College Child Development Center is an Early Childhood Program designed to meet the child care needs of the college community. The center-based program provides warm, loving care that meets the Standards and Areas of the National Academy of Early Childhood Programs. The Child Development Center is currently licensed to provide services to children between the ages of 2.9 years through six years. The enrollment priorities are as follows: students, faculty/staff, and community. The program is also a training site for students of the college in Early Childhood Education Teacher Training.

The program is licensed by the Massachusetts Office for Children, and is located in the McKay Campus School Teacher Education Center. The center is open from 7:30 am to 5:30 pm Monday through Friday, on a year-round basis. The Fitchburg State College Child Development Center is managed by Associated Children's Services, Inc., a private agency. For more information about the program, call 978-343-9149.

Student Escort Service

The Department of Public Safety provides escorts anywhere on campus and within a ten minute walking radius of the campus. The student escorts work in pairs and have radio communications with the Public Safety Police Officers. This service is available from 7:00 pm–1:00 am during the fall and spring semesters. For requests during the remaining semesters and during unpublished hours, Public Safety Police Officers provide escorts within the immediate area. The escort service can be reached by calling 978-665-3111 or TTY: 978-665-3588.

Student Life: Beyond the Classroom

Fitchburg State College maintains that emotional, physical, social, and spiritual growth extends beyond the classroom and into the total campus environment. The college offers individuals and groups a variety of avenues for self-discovery and expression. Fitchburg State students who choose to become active in campus life, by accepting new commitments and adding responsibilities, often find avenues which will direct them toward their career and other life goals. They develop significant, enduring relationships with faculty, administrators, and other students, thus establishing a support network for years to come.

New Student Orientation

The orientation program at Fitchburg State College is designed to assist incoming, full-time students in making the transition from high school or work to college. Built on a concept of "student development," the orientation takes a holistic approach to addressing students' intellectual, emotional, physical, social, and spiritual dimensions.

Coordinated by the Student Affairs Office, the orientation helps both students and their families with the transition to FSC and gives them a feeling for and identity with FSC, as follows:

- Students focus on testing, academic advising, and registration for classes
- Students are introduced to campus life and services available to them through a variety of programs and activities
- The Family Program gives valuable information about the college, as well as tips for easing students' and family members' transition to FSC

Typically, the orientation program is scheduled during the summer with additional programs during the first week of the school year. All new students receive advance notification and information about the program and are expected to attend.

Residence Life

On-Campus Housing

Fitchburg State College has several options for on-campus living, including traditional residence halls, high-rise buildings, suites, or apartment-style units. Each residence has its own unique attributes. These living/learning centers are a major focal point of campus activity.

Each residence hall room is equipped with cable television and data (electronic mail, Internet access) hookups, along with individual phone service including voice mail. A number of additional services are provided to students through rental programs including; Microfridge units (a medium-sized refrigerator/freezer with a microwave oven on top), linen program (especially designed for the extra long beds in the residence hall rooms), and a room carpet purchase program.

Living and Learning Centers have been developed in all of the residence halls. These Centers are designated areas in each residential complex that house computers (complete with electronic mail and Internet Access) for student use. Students may utilize these areas for studying, as well as, a place for faculty to visit to enhance the academic environment.

Aubuchon Hall

Aubuchon Hall is an eleven story high-rise, housing approximately 400 male and female students. Aubuchon offers a variety of special conveniences. Each floor has 20 rooms along with common area television, laundry facilities and kitchen area with a microwave. The first floor offers a full kitchen, lounge, and study area.

Russell Towers

Russell Towers, a co-educational hall, houses approximately 200 residents divided among three towers. This building is comprised of 36 suites with 6-8 students per suite. Students in this building are housed in designed singles, premium singles (double sized rooms for one) and deluxe singles (triple sized rooms for one). Each suite has its own lounge area and bath. The suite arrangement offers a unique opportunity to form close-knit communities within the larger Russell Towers community. In addition, each tower contains lounges with televisions and study areas. A laundry room, bicycle room, weight room, and pool table area are also available to Russell Towers residents.

Herlihy Hall

Herlihy Hall houses 150 students in immense double-sized rooms with an atmosphere that is particularly intimate and conducive to study. Residents of Herlihy enjoy a large, bright main lobby and a basketball court behind the building. Herlihy produces some of our most loyal alumni.

Mara Village

Mara Village, opened in 1989, consists of seven resident buildings housing approximately 45 students each, a Commons Building and a volleyball court. Each resident building is divided into suites of four to nine people, each equipped with double rooms, a living room and bath. In addition, each resident building contains a larger common lounge and kitchenette. Two buildings within this complex have been set aside as female only housing. Additionally, one building has been reserved for non traditional aged students (age 23 or older), graduate students and those students who wish to remain on campus year round (12 months).

The Townhouses

The Townhouse Apartment Complex, comprised of 33 apartments for mostly upperclass students is located between Highland Avenue and Cedar Street. Each apartment is equipped with a combination living room/kitchen area, 1-1/2 baths, and individual bedrooms for each resident. Students residing in the Townhouses are not required to be on the college meal plan, but do have the option to purchase one.

Living Options

Students are offered a variety of lifestyle options for living including:

- Alcohol and tobacco free housing
- Nontraditional housing for students over age 23
- Graduate student housing
- Designed single rooms
- Premium single rooms (double sized rooms for one)
- Deluxe single rooms (triple sized rooms for one)
- Quiet living areas (24 hour quiet hours)
- Undeclared majors student housing
- Honors housing (for students in the Honors Program)
- Twelve-month housing
- Neighborhood housing
- Accommodations for wheelchair users

Each residence hall is staffed by full-time professional Residence Directors (RD) and several student Resident Assistants (RA). These individuals help secure the hall, assist students in working out living arrangements, guide residents in adjusting to campus life, and serve students as advisors, educational programmers, building managers, and resource/referral aids.

Annually, residence hall space is in high demand. Students who wish to live on campus are advised to apply for admission-with-housing. Additional questions concerning on-campus housing should be directed to the Office of Residence Life, Aubuchon Hall 978-665-3219.

Student Activities and Organizations

Student Activities and Hammond Campus Center

The Student Activities and Hammond Campus Center Office coordinates the cocurricular programs and activities, and the operations of the Campus Center building. The Department is committed to enhancing students' educational experiences through the development of, and participation in diverse programs and activities. The Hammond Campus Center endeavors to serve as the focal point of the campus, bringing together members of the Fitchburg State community.

The Student Activities Office and the Hammond Center are the hub of extracurricular events on campus. The office is committed to the principles of leadership development, enhancing student life outside the classroom, and to providing cultural and social opportunities. The offices maintain many resources about the college student organizations and the numerous opportunities open to individual students.

Student Organizations

Student Government Association (SGA)

The purpose of the Student Government Association as set forth in its constitution is:

> ". . . to be the democratic ruling body for and by the students, whose main goals are to unite the student body and address their various needs; to secure and defend the rights and freedoms necessary for our full participation in the educational process; to ensure the civil rights of the membership; to be a voice for the student body to the faculty, administration, and the community at large."

As the official voice of the students, the **Student Government Association** plays two important roles for the student body:

- Participates in campuswide committees as well as state and national student organizations
- Governs the many committees responsible for student affairs, activities, and clubs

The governing body of SGA is the SGA Council, which is comprised of an Executive Board and Commuter's Board. Elections for positions on these boards are held every spring for the upperclass members and in the fall for freshmen.

The SGA offers a number of services to its members, including programming, photocopying, and legal advice. Student participation is welcomed and encouraged.

Clubs, Fraternities, Sororities, and Other Groups

The college is proud to support a wide variety of student organizations that encompass a broad spectrum of interests. Participation in student organizations is encouraged to round out the academic experience and develop skills which will last a lifetime.

Membership in college clubs and organizations is generally open to all FSC students; for meeting times and locations, contact the Campus Center/Student Activities Scheduling Office.

A list of the organizations on campus includes:

Academic Honor Societies

National

Alpha Delta Omega (Human Services)
Epsilon Pi Tau (Industrial Technology)
Kappa Delti Pi (Education)
Omicron Delta Epsilon (Economics)
Sigma Theta Tau (Nursing)
Sigma Tau Delta (English)
Phi Alpha Theta (History)
Psi Chi (Psychology)

Local

Communications/Media Honor Society
English Honor Society

Academic Interest Groups

Accounting Society
Associated Builders and Contractors
Biology Club
Chemistry Club
Clinical Laboratory Science Club
Communications/Media Club
Computer Science and Math Club
Early Childhood Club
Elementary/Middle School Education Club
English Club
Fitchburg Industrial Technology Association
French Club
Geography Club
History Club
Honors Club
Human Services Club
Marketing Club
Nursing Student Association
Psychology Club
Society for Advancement of Management
Sociology Club
Special Education Club/Council for Exceptional Children

Fraternities

Esoteric Society
Iota Phi Theta Fraternity, Inc.
Sigma Pi
Sigma Tau Gamma
Phi Beta Sigma

Sororities

Adelphian Society
Neasylon Society
Phi Sigma Sigma
Sigma Sigma Sigma
Tokalon Society

Residence Hall Government

Aubuchon Hall Council
Herlihy Hall Council
Inter-Hall Council
Mara Village Council
Russell Towers Association
Townhouse Board of Governors

FSC Student Government

Commuter's Board
SGA Senate
SGA Council
SGA Class of 1998
SGA Class of 1999
SGA Class of 2000
SGA Class of 2001

Special Interest Groups

Amnesty International
Black Student Union
Cogito Ergo Sum (Disability Awareness Group)
Dance Club
FSC Band
FSC Cheerleaders
FSC Falcon Players
FSC First Response Team
International Student Union
Intervarsity Christian Fellowship
Inter-Fraternity Sorority Council
Karate Club
Latin American Student Organization
L.M. Perlstein Co. (ROTC)
Legal Association
MASSPIRG
One in Ten and Friends
Outdoor Adventure Club
Programs Committee
SAXIFRAGE (Yearbook)
SCRIMSHAW (Literary Magazine)
Society of Motion Pictures and TV
Society for Technical Communication
Sports Medicine Club
The Point (Newspaper)
WXPL Radio—91.3 FM
Volleyball Club

Musical Groups

Fitchburg State College offers a variety of musical programs for both the musician and the music lover.

60-piece Concert Band performs music of all types, from the transcriptions of classics to contemporary sounds.

Jazz-Rock Ensemble features big band, jazz, rock, and experimental music for stage bands.

FSC Choir performs a wide selection of mixed-voice choral pieces.

Whenever instrumentalists are available, small ensembles of various instruments, including brass, woodwind, and recorder, get together to play.

Religious Life

Many churches, synagogues, and other religious congregations are located within walking distance of the campus. In addition, the Newman Center student parish, whose modern center was built with the help of Fitchburg State Industrial Arts students, provides a spiritual and social gathering place for many students. The Center, which hosts many student functions throughout the academic year, is located on Highland Avenue, adjacent to the college.

Intercollegiate and Intramural Sports

The Department of Athletics at Fitchburg State College, supported by the General Student Fee, offers every student an opportunity to participate in athletic activities on varsity, intramural, and/or recreational teams. These opportunities enhance the academic experience by providing healthy competition at all levels of skill.

Intercollegiate Sports

The Fitchburg Falcons varsity teams have enjoyed national and regional recognition as highly competitive NCAA Division III teams. The sixteen varsity teams represent men and women in both indoor and outdoor competition.

Fitchburg State is a member of eighteen intercollegiate Athletic Associations, which entitles successful teams to participate in tournament and championship play. FSC is a charter member of the Massachusetts State College Athletic Conference (MASCAC), which includes seven other state colleges.

The Student-Athlete Advisory Committee, composed of students and cochaired by the Director of Athletics, oversees the Intercollegiate sports program. They provide direction and insight to meet the interests, needs, and abilities of the student body in concert with Title IX and gender equity.

The college offers three seasons of Intercollegiate varsity competition as follows:

Fall Season

Competition runs from early September through early November:

- Men: football, soccer, cross-country
- Women: soccer, field hockey, volleyball, cross-country

Winter Season

Competition runs from late November to early March; practice starts in late October or early November

- Men: hockey, basketball, indoor track
- Women: basketball, indoor track

Spring Season

Competition runs from late March through early May; baseball and softball practices start in early February, and the teams often travel to Florida for spring break. Track and field practice starts once indoor track has finished its season.

- Men: track and field, baseball
- Women: track and field, softball

Information regarding preseason tryouts and team meetings is available in the Athletic Office and by notices posted throughout the college community.

Athletic Eligibility

Students who plan to participate on team sports must be making "satisfactory progress toward a baccalaureate," defined as successful completion of:

- 24 semester hours of course work prior to entering their third full-time semester
- 48 semester hours of course work prior to entering their fifth full-time semester
- 72 semester hours of course work prior to entering their seventh full-time semester

Full or part-time status shall be determined by the end of the Add/Drop period. See Academic Policies and Procedures section for academic requirements. In addition to Fitchburg State College academic requirements, students must meet the requirements of the NCAA, ECAC, and MASCAC.

Intramural Sports

An active intramural program, run by students on the FSC Intramural Council, offers the opportunity for all students to participate in a wide range of activities. Student involvement plays a large part in the success of the program, the goals of which are fair play, leadership development, cooperation, and enjoyment.

The sports offered attempt to meet the needs and requests of the college community and include: coed volleyball, street hockey, basketball, flag football, soccer, 3 on three basketball, Frisbee, and softball.

Notices of intramural activities are posted around the campus throughout the year. Sign-up sheets are available at the Department of Athletics.

Open gym time is also available on a daily basis for student use. Hours are posted on the bulletin boards located at the Athletic Office and in the gymnasium foyer.

Student Code of Conduct and Discipline System

Student Code of Conduct

Fitchburg State College recognizes that students, as members of society and citizens of the United States of America, are entitled to respect, consideration, and guaranteed freedoms of speech, assembly, and association under the U.S. Constitution. The college further recognizes the students' right within the institution to freedom of inquiry and the responsible use of the services and facilities of the college.

Students at Fitchburg State College have a responsibility to act in a manner that promotes the well-being, respect, safety, and security of all members of the college community. Behavior, whether on or off-campus, that calls into question a student's suitability as a member of the academic community, or places college members at risk, will not be tolerated. Such behavior will result in disciplinary action ranging from a warning to dismissal.

The complete text of the Student Code of Conduct is found in the *Student Handbook* which is available at the Student Affairs Office.

Student Discipline System

The goal of the Student Discipline System is to support the educational mission of the college by insuring that an atmosphere of acceptance, curiosity, and integrity is maintained on the campus. By educating and enforcing mature and responsible behavior the Student Discipline System promotes students' respect for the rights of others, their receptivity to new and challenging ideas, and civil and courteous behavior. The complete text of the Student Discipline System is found in the Undergraduate Student Handbook which is available at the Student Affairs Office.

Good Neighbor Policy

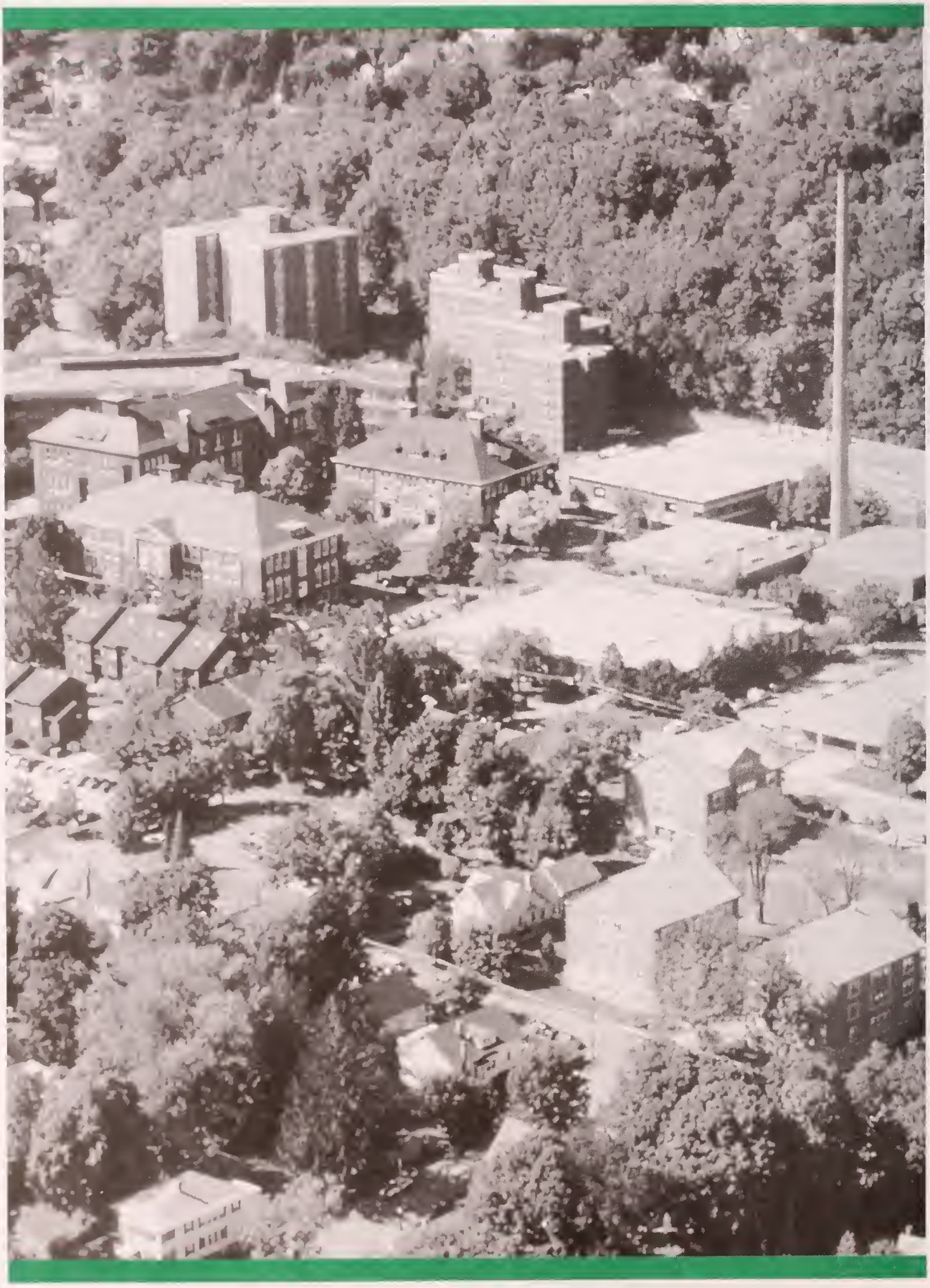
Students who reside in or visit the college neighborhood are expected to demonstrate respect and concern for all members of the local community. As such, FSC expects students to demonstrate responsible citizenship in the local neighborhood by participating in any of the several community service opportunities available for students. Contact the Campus Center/Student Activities Office for more information.

To support the goal of being "good neighbors," the following conduct (and any other of a like sort) will not be tolerated and will constitute violations of college policy for which students are subject to being disciplined whether the conduct occurs on or off the campus:

- making excessive or unreasonable noise
- sponsoring parties for profit (the illegal sale or distribution of alcoholic beverages, which may include the use of tickets, tee-shirts, mugs, cups and/or any other items as a price or condition of admission)
- sponsoring excessively large parties
- serving minors alcohol
- disorderly conduct, harassment of neighbors, defacing or damaging property, throwing objects out windows
- public drinking, public urination
- using, selling, or distributing illegal drugs
- interfering with the City of Fitchburg Police or utility agencies in the performance of their duties
- using, selling, manufacturing, or distributing fake IDs

Students who violate college policy and/or federal, state, or local law and, by doing so, call into question their suitability as members of the college community, are subject to the ruling of the Student Discipline System in addition to the appropriate body of federal, state, or local law. If found responsible, students are subject to sanctions up to and including loss of residence or suspension or dismissal from the college.

Campus and Facilities



Directions to the College

Fitchburg State College is located in a residential section of Fitchburg, the urban center of North Worcester County. It's approximately 25 miles north of Worcester, 50 miles west of Boston and 15 miles south of New Hampshire. The compact campus of 32 buildings on 48 acres is easily accessible by car, bus, or train from all areas of New England.

By car: From within Massachusetts: Take Interstate 91, 190 or 495 to Rte. 2 to exit 32. Follow Rte. 13 north (toward Lunenburg) to Rte. 2A (about four miles), then take a left toward Fitchburg. At the intersection of 2A and the John Fitch Highway (about 1-1/4 miles), turn right, pass through a set of blinking lights and, at the next stop light, turn left onto Pearl Street. The college is located about 1/4 mile up Pearl Street.

From New Hampshire: Take Rte. 12, 13 or 31 to Fitchburg. Follow city map insert.

From Connecticut: Take either Interstate 91 or 84 to the Massachusetts Turnpike, exiting north on to Interstate 290 in Auburn. Follow 290 to Interstate 190 north to Rte. 2, exit immediately at exit 32 and follow directions given above for Massachusetts locations.

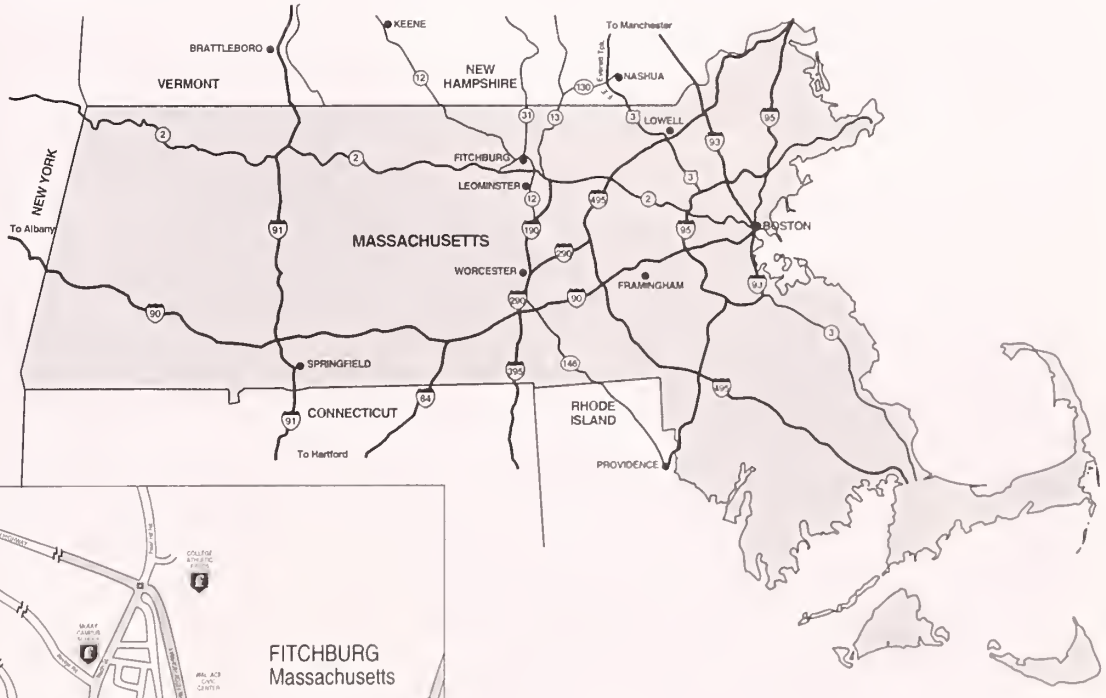
From Rhode Island: Take Rte. 146 north to Interstate 290 through Worcester exiting onto Interstate 190. Follow instructions for Massachusetts locations.

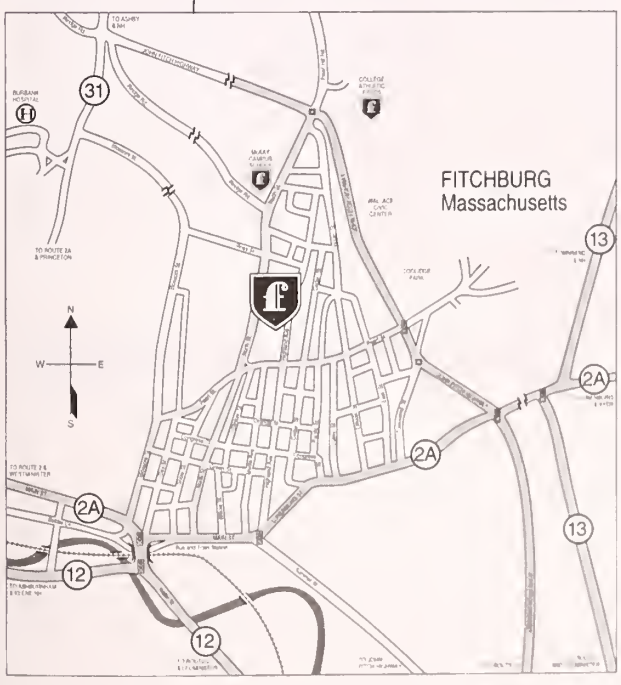
By bus or train: Daily MBTA trains to and from Boston stop on Main Street in Fitchburg. Cross Main Street to North Street. The college is three blocks north. See insert map.

Trailways buses from Pittsfield, Springfield and Worcester also stop on Main Street near the MBTA Station. Follow walking directions above.

Buses from Boston stop at the intersection of Rtes. 2 and 12. Cab or local bus service to the college is available from that stop.

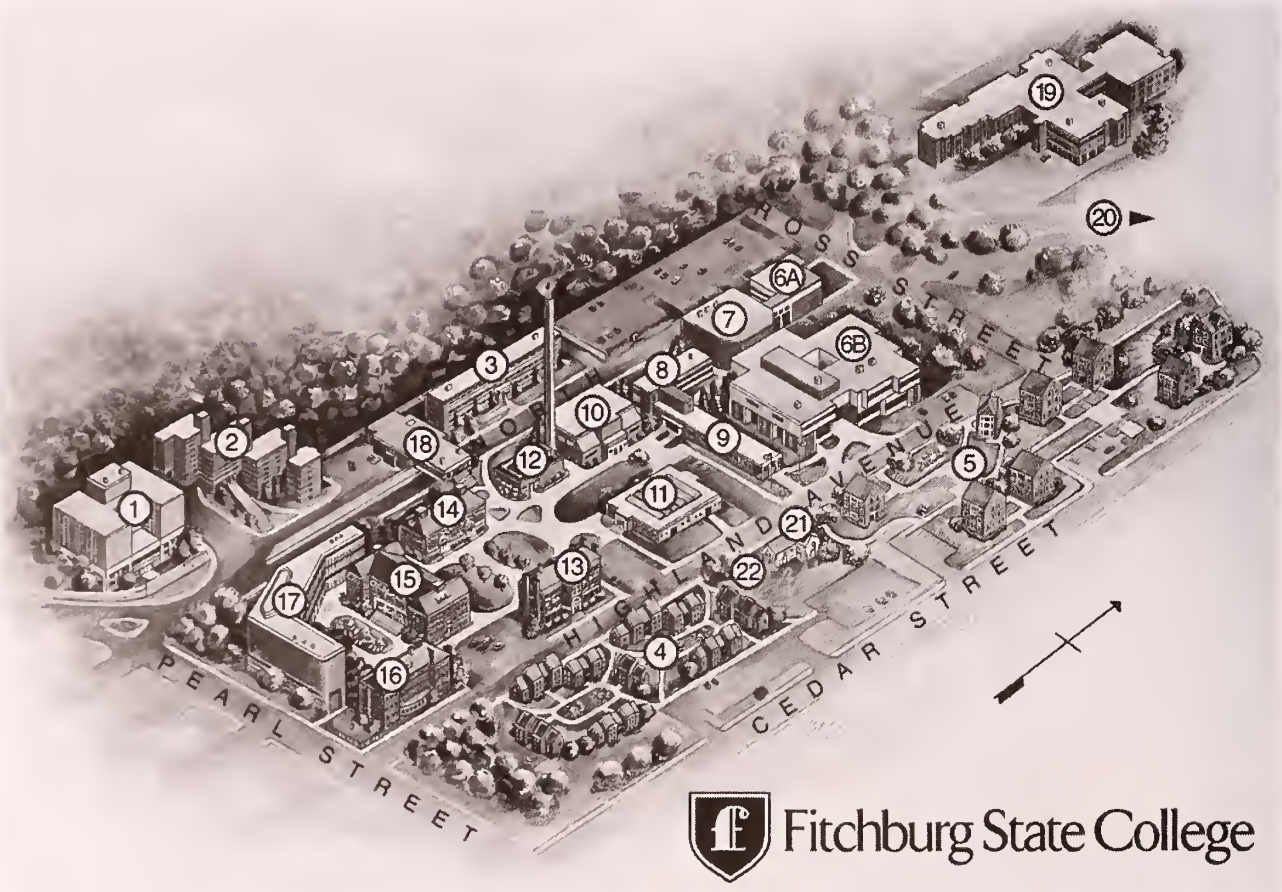
If you have any questions, please call 978-345-2151.





Campus Map

1. *Aubuchon Hall Residence Hall*
2. *Russell Towers Residence Hall*
3. *Herlihy Hall Residence Hall*
4. *Town House Apartments*
5. *Mara Village*
6. *Conlon Building*
   A. Fine Arts
   B. Industrial Technology
   Communications/Media
7. *Weston Auditorium*
8. *Condike Science Building*
9. *Sanders Administration Building*
   Admissions Office
   Graduate and Continuing Education Office
10. *Parkinson Gymnasium*
11. *Willis B. Anthony Building Receiving*
12. *Power Plant Campus Police*
13. *Percival Hall*
14. *Edgerly Hall*
15. *Thompson Hall*
16. *Miller Hall*
17. *Hammond Building*
    Library/Campus Center
18. *Holmes Dining Commons*
19. *McKay Campus Building*
20. *Athletic Field*
21. *Newman Center*
22. *Alumni House*



Fitchburg State College

Buildings and Grounds

Located in the unique three-mountain area known as the Montachusett region, FSC features a traditional New England quadrangle graced by historic brick buildings. Residence units, academic buildings, the library/campus center, auditorium/theater, dining commons, gymnasium, and other facilities are all within a short walking distance from one another. Just north of the campus is a 36-acre athletic and recreational area as well as the McKay Campus School. Other outdoor recreational opportunities are available in the 120-acre conservation area spanning three neighboring communities.

Campus Facilities

All students are encouraged to utilize the many campus services and facilities available, including the computer center, athletic facilities, library, and many others. Access to these facilities often requires a valid IDENTIFICATION CARD, which can be obtained at Image Systems on the third floor of the Conlon Industrial Arts Building. ID Cards should be validated every semester.

The College Library

The Fitchburg State College Library, located in the Hammond Building, is a comprehensive information center dedicated to the educational development of students. A knowledgeable staff and easily accessible print and electronic collection promotes the interaction between students and resources available to them. The main library serves the undergraduate and graduate programs. A second library, located in the McKay Campus School, serves the McKay teachers, staff, and children.

The library provides the following services and volumes:

- Book collection of 207,000 volumes and 449,000 microform equivalents
- 13,000 volume Reference Collection and a Children's Collection of 7,300 volumes
- Approximately 1,400 periodical titles and access to 1,000 full text on-line periodical titles
- 33,700 bound volumes
- 15,400 reels of microfilm
- Paper indexes and abstracts as well as on-line indexes (available over the campus network)
- CD-ROM network for research among the periodicals, including 10 CD-ROM index and abstract subscriptions and numerous other CD-ROM reference services
- On-line database searching
- Electronic encyclopedia
- Access to the C/WMARS automation network
- Borrowing arrangements with 28 other Massachusetts academic libraries
- Resources in Education Collection (ERIC), a comprehensive updated Education library system consisting of 403,000 items
- Special Collections Department which includes the college archives and the manuscript collections of former FSC students, faculty, and alumni, including Robert Cormier and Robert Salvatore

The library is open 97 hours and seven days a week and provides study tables, carrels, and seating on all four levels. Library hours vary during the winter and summer semesters as well as holidays. Students are encouraged to call for complete schedule information. Service for the collection is provided by fourteen professional librarians, who assist at the Library Information Desk and also conduct library instruction classes for the college community. To arrange for such a session students can contact the staff at the Library Information Desk at 978-665-3223.

Campus Center

The Campus Center serves as a gathering place for both commuter and resident students. Located in the Hammond Building, the Center's facilities include:

- Campus Information Center
- Commuter Cafeteria
- Art Gallery and the Craft Center
- Ground Zero Game Room
- College Bookstore
- Underground Pub
- Post Office
- Meeting and Function Rooms
- Offices of the Student Government Association, *the Point*, and the Student Organization Club Room

Computer Facilities

Fitchburg State College has several computer facilities around the campus to serve the general administrative, educational, and research needs of the campus.

The Office of Management Information Services (MIS)

The College Computer Center serves the general administration, educational, and research needs of the campus. Several major units of equipment satisfy the needs. The Tricord ES8000 and CDC Cyber 932-32 mainframes serve the administrative computing needs of the college. An Alpha Server 2100 acts as the central locus for faculty members, students and staff, providing an enhanced environment for many computer science applications, electronic mail and internet access capabilities as well as a Proliant DHCP server hosting TCP/IP to the entire campus. Five accessible general-purpose microcomputer labs, five residence-hall labs (living learning centers), and one VAX terminal lab also exist for general academic use. Falcon Net, FSC's major telecommunications upgrade, has recently been completed. Through Falcon Net, the technological tools of voice, video and data communications, each classroom and residence hall offers high speed T-1 network connectivity. Along with classroom integration of networking and the internet, this also makes possible the full potential of distance learning and video conferencing as well as scalable infrastructure prepared for the growth of tomorrow.

Microcomputer Laboratories

FSC has five accessible, general-purpose microcomputer laboratories and a dedicated VMS terminal lab in the following locations:

- A PC lab with 24 computers and a Macintosh lab with 20 computers are located in McKay
- Hammond Building (third floor) has a PC lab with 30 computers and a Macintosh lab with 24 computers
- Edgerly Building (first floor) houses a PC lab with 28 computers

All of the labs are networked together via the Micro Vax 3100 and Tricord DS1700 servers and provide access to applications, mail, and the world wide web via the microcomputer network.

Several academic departments have discipline-specific computer labs for use by students studying in: Business Administration, Computer Science, Nursing, Elementary Education, Early Childhood, Middle School, Special Education, Industrial Technology, Communications/Media, Mathematics, and English.

Adaptive Computing Lab

The Adaptive Computing Lab addresses those students with special computing needs. Housed in the Hammond Building (third floor), it contains equipment needed to provide large print, braille, voice-operated computing, talking scanners, and other software and hardware.

Computer Science Department

The Computer Science Department has additional equipment dedicated for use in that discipline, including:

- Electronic hardware and prototyping equipment to support both analog and digital laboratories
- Small microprocessor systems that allow students to work on design experiments that would be impossible or, at least impractical, on larger computer systems
- Computer networks and intranet systems including SPARC workstations running Solaris, and Intel PCs with Windows '95, Windows NT, Linux, and a Novell network

This provides students with state-of-the-art systems and design equipment currently being used in industry. These computer laboratories also provide the students with access to the Internet as well as a Web server for developing their own home pages.

Visit Fitchburg State College's home page at **http://www.fsc.edu**

Center for Academic Computing

The Center for Academic Computing was established in 1996 with the intention of supporting faculty with their computer needs. Services include:

- Electronic expertise for faculty developed courses and programs
- Consultation in the purchase and installation of faculty computers and equipment
- Repairing problems in a timely manner

The Center is located in the Industrial Arts wing of the Conlon Building.

Professional Development Center

The Professional Development Center, established in the fall of 1990, provides leadership and vision to central Massachusetts' public school districts as well as to private and individual school members through the assessment, design and implementation of quality staff development. Both the content and methodology of its programs demonstrates a commitment to systemic models of staff development, to implementation of all parts of the 1993 Massachusetts Education Reform Act and to the principles of adult learning. It focuses on public school district short and long term goals and facilitates re-structuring plans and re-certification needs of district teachers and administrators.

In addition to providing leadership in district staff development planning, the Professional Development Center sponsors and manages major conferences on Best Teaching Strategies, conferences for Vocational/Technical High School Teachers and, in concert with the College Board, training for Advanced Placement High School Teachers.

Recent training has focused on: Alternative Assessment, Portfolios, Discipline-Specific Teaching Strategies in Mathematics and the Sciences, Multiple Intelligences, Environmental Science for Elementary Teachers, Leadership Institutes for Public School Administrators.

Resident Housing

A variety of resident housing options are available for students who choose to live on campus. The five campus residence halls provide housing for more than 1400 students. All residence halls are centrally located to classrooms, offices, the library, computer laboratories, auditoriums, and the Campus Center. Situated adjacent to the residence halls is Holmes Dining Commons, where various meal plans are offered to resident hall students. For specific information on resident housing, please refer to the Residence Life section of the catalog.

Athletic Facilities

Fitchburg State College has a wide range of athletic facilities both indoors and out.

- **Parkinson Gymnasium** contains volleyball courts, basketball courts, a fitness center for training/conditioning, and the office of the Certified Athletic Trainer.
- **McKay Campus School** gymnasium is used for intramural activities.
- **Thompson Hall** has a dance/aerobics studio.
- **Robert Elliot Complex** on Pearl Hill Road is the site of the outdoor athletic facilities, including fields for baseball, field hockey, football, soccer and intramurals; a chem-turf track; tennis courts, and outdoor basketball courts, which double for street hockey.
- **George Wallace Civic Center** houses the ice hockey program.
- **Anthony Building** is the location of the Department of Athletics.

Outdoor Recreation in the Montachusett Area

The name "Montachusett" is a conglomeration of the names for the three mountains that surround the College. Mt. Monadnock, Mt. Watatic, and Mt. Wachusett offer trails for hiking and slopes for skiing. Students are encouraged to take advantage of this rugged terrain with free rentals of cross-country skis, canoes, and tents from the Campus Center/Student Activities department. Students may also join the FSC Outing Club, which sponsors outdoor trips.

Parking Regulations

Fitchburg State College provides parking facilities for over 1,000 vehicles. The college requires that all vehicles utilizing the parking facilities must display the proper identification sticker. Stickers may be obtained at no cost at the Public Safety Office. Visitors to the campus may obtain temporary parking permits from the Public Safety Office.

Resident students may have vehicles on campus, if requested. Along with having a sticker, they must park in the designated college controlled lots for overnight parking and the city streets after 8:00 am during the week.

A booklet entitled *Motor Vehicle Regulations* with specific information on vehicle and parking regulations may be obtained from the Public Safety Office.

Additional Parking

Parking is also available at the Wallace Civic Center. Shuttles run every fifteen minutes to and from the campus.

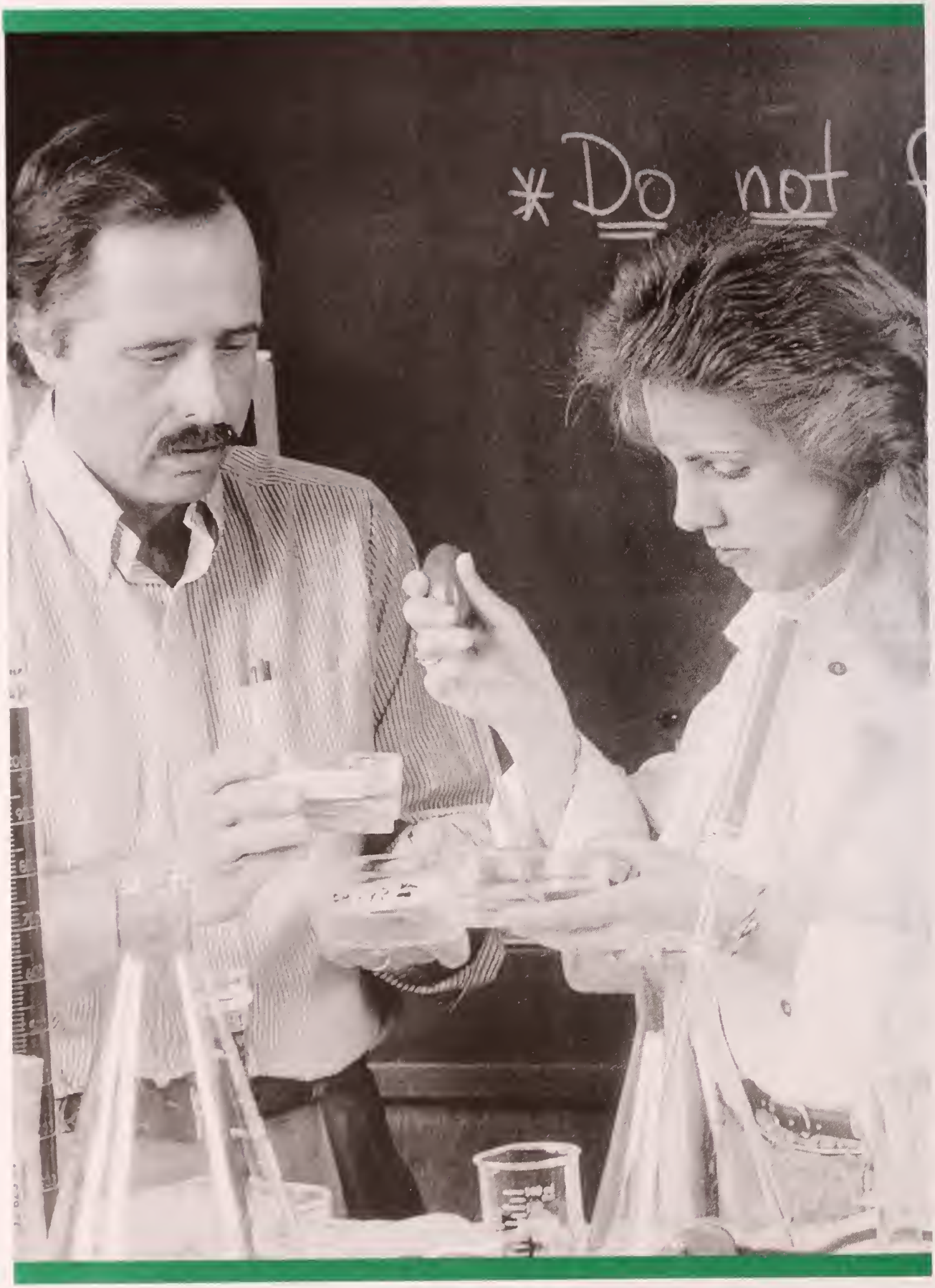
Handicapped Parking Permit

A special parking permit is available to students with a temporary handicap. Students with a permanent disability do not need a permit but should display state-issued handicapped plates. Motor vehicles bearing a permit or state-issued handicapped plates are eligible to park in all parking spaces designated by a BLUE and WHITE handicapped parking sign between the hours of 7:00 am and 12:30 am.

Animals on Campus

Due to health and safety considerations, no animals are allowed on campus or in campus buildings at any time. The only exceptions are guide dogs and laboratory animals.

The Curriculum



At Fitchburg State College each curriculum or course of study has been constructed to help students develop the intellectual skills needed to analyze, interpret, and learn. The purpose of every curriculum is to assist students in recognizing the possibilities as well as the problems of their changing world, to instill within them a moral awareness of their responsibilities toward improving the quality of human life, and to prepare them for careers which will enrich their lives as they contribute to the lives of others.

Each curriculum includes a Liberal Arts and Sciences program and courses in a major field of study. The purpose of the Liberal Arts and Sciences requirements is to develop through a variety of academic disciplines a set of well-rounded skills that are analytic and quantitative as well as verbal and aesthetic. By concentrating in a major field of interest, students acquire knowledge of both the theoretical and the practical aspects of their subject.

Incoming Students: The Readiness Program

All first-year and transfer students will be tested or otherwise evaluated upon entrance to Fitchburg State College to determine their proficiencies in reading, writing, and mathematics. Exams are scheduled both days and evenings throughout the academic year. If their skills are found deficient by college standards, students will be required to participate in a readiness program designed to improve basic academic abilities and to provide new students with a solid and equal start to their college careers.

Readiness Program Courses and Requirements:

EDUC 1000—Personal Reading Improvement: strongly advised for first-year students who score in the bottom 25th percentile on the reading proficiency examination.

ENGL 0100—Basic College Writing: required for first-year students whose writing skills are determined to be unsatisfactory and if they have no transfer credit equivalent to Writing I and/or Writing II.

MATH 0200—Basic Mathematics II: required for freshmen whose tested mathematics skills are determined to be below college level. **Transfer students** who fail the mathematics examination will not be required to take these courses unless they wish to enroll in a mathematics course at the 1000-level or above.

Credit for ENGL 0100 and MATH 0200 is considered Institutional Credit only; that is, **the courses will not count toward graduation,** but will count toward full-time status for purposes of financial aid and athletic eligibility. Additionally, the grades received in these courses will be counted in each participant's Grade Point Average.

Common Graduation Requirements

In order to be eligible to graduate with a baccalaureate degree from Fitchburg State College, the following general requirements must be met:

- Successful completion of at least 120 semester hours of course work; 45 of these must be attained in residence (normally including the senior year)
- A cumulative GPA of 2.0 or higher
- A 2.0 average in major course of study
- An application for graduation must be filed with the Registrar's Office by January 1 of the year of anticipated graduation

Liberal Arts and Sciences Program Requirement

Of the 120 semester hours needed to graduate, candidates must spend a minimum of 60 hours satisfying the requirements of the Liberal Arts and Sciences Program, which includes the Readiness in English and Mathematics (if necessary) and the Constitution requirement (for teacher education majors only) as well as the following components:

- Quantitative/Scientific Cluster ("Q" symbol in course schedule)—4 courses, 1 must be a mathematics course beyond the readiness level; one must be a science lab. (NB: 4 courses, regardless of whether they carry three or four hours of credit, must be completed)
- Ideas and Events Cluster ("I" symbol in course schedule)—three courses, one must have a historical perspective
- Human Behavior Cluster ("B" symbol in course schedule)—2 courses
- Literature, Language, and Arts Cluster ("L" symbol in course schedule)—4 courses, 1 must be in Literature and 1 must be in Arts
- Writing I & II-ENGL 1100 and 1200, or their equivalent if taken at another institution.
- Health and Fitness—(See Health and Fitness) Requirement under Physical Education Program
- Junior/Senior Writing—specific requirement(s) defined by the department of the student's major
- Computer Literacy—specific requirement(s) defined by the department of the student's major

- Speaking Listening—specific requirement(s) defined by the department of the student's major
- Interdisciplinary ("IDIS" or departmental prefix in schedule)—two courses, one of which must be taken in the freshman year. These courses can simultaneously meet the requirements in content clusters
- Multicultural ("C" symbol in course schedule)—2 courses, which can simultaneously meet the requirements in content clusters
- Intermediate and Advanced Requirement—3 courses at the Intermediate or Advanced level in a Liberal Arts or Science discipline outside one's major. These courses can simultaneously meet the requirements in content clusters
- Liberal Arts and Sciences Electives—4 courses chosen from among those designated as part of the Liberal Arts and Sciences Program

Candidates should be aware that the following restrictions apply with respect to fulfilling their Liberal Arts and Sciences requirements:

- Credits earned in one course cannot be divided
- Credits earned toward graduation cannot be counted twice, even though courses that satisfy Liberal Arts and Sciences requirements may also fulfill the requirements of one's major course of study

Certain majors specify which courses must be taken to satisfy the candidate's Liberal Arts and Sciences requirements. Students should read the section pertaining to their selected major carefully before registering for classes.

Additional course work is required for graduation from individual programs and certificates.

Teacher certification or initial provisional certification requires knowledge of the Federal Constitution and that of the Commonwealth. Candidates may fulfill it in either of two ways:

- By passing a written examination on the federal and state constitutions. Exams are offered by the Social Science Department at least three times annually and may be taken as often as is necessary (a pamphlet on the exam and a study guide may be obtained from the College Bookstore); **or**
- By successfully completing one of the following courses:

HIST	*1400*	*United States History I*
HIST	*1500*	*United States History II*
POLS	*1500*	*State and Urban Government*
POLS	*1000*	*U.S. Government*

Freshman Foundation Year

The courses required in a full-time, undergraduate student's first year demonstrate that the Liberal Arts and Sciences program offer content and skills that are significant in the development of critical thinking and serve as the foundation for further learning in major areas. Along with fulfilling the Freshman Foundation courses as outlined below, every incoming freshman will be required to read two books that are related to a designated theme.

Freshman Foundation Year Program

- Writing I and Writing II
- Liberal Arts and Sciences courses in at least three clusters
- An Interdisciplinary course
- Additional courses chosen in consultation with advisor

Major Course of Study

Candidates must choose a major course of study, either at the time of enrollment into the college or before the end of their sophomore year. The requirements of each individual major may vary from 33 to 63 semester hours. Students must formally apply to their major by filling out a form available from the Academic Advising Center or from the chair of the individual department.

Changing a major or degree program: Students may change their major or degree program as long as they can meet the requirements for their new major. Often changing one's major increases the amount of time required to complete the baccalaureate program and not all programs (e.g., Nursing) can accept applicants who wish to transfer to that field.

Programs having requirements for internal transfer are Communications/Media, Human Services, Clinical Laboratory Science, Nursing, and Education programs.

Double Major: Degree candidates wishing to earn a baccalaureate with two majors must satisfy the requirements of both programs, even if doing so requires more than 120 semester hours of study.

Double major candidates

- Are assigned an advisor in each major
- Select what degree is to be granted, the BA, BS, or BSEd Degree, since only one degree is permissible
- Receiving a BSEd must also complete a major in an Arts and Sciences discipline
- Enroll for the second major the same way as they did for the first degree

Academic Minor: The academic minor is an ideal way to explore a field other than that of one's major.

Minors are offered in African-American studies, art, biology, business administration, chemistry, computer science, criminal justice, dance, economics, English, French, geography, German, graphics, history, industrial science, international studies, mathematics, music, philosophy, physical education, political science, psychology, public service management, Russian studies, sociology, Spanish, theater, and women's studies. (All minors are not available through the evening division.)

Although the minimum number of credits required for the completion of a minor is fifteen, the amounts vary significantly from discipline to discipline, as do the kinds of prerequisites needed. Interested candidates should refer to the "Undergraduate Programs" section of the catalog for further information.

Degrees Offered

Fitchburg State College offers three undergraduate degrees:

- Bachelor of Arts
- Bachelor of Science
- Bachelor of Science in Education

Each degree has its own specific requirements for graduation. For example, the BSEd degree candidate must complete all the requirements of a BA or BS degree with a Liberal Arts or Sciences major. A student may only be awarded one degree unless they have fulfilled the provisions for a double degree.

Double Degree

Students wishing to earn two bachelor's degrees at Fitchburg State College may do so by satisfying the degree requirements for the two programs prior to receiving the second degree. They must earn 30 semester hours credit beyond the 120 hours required for the first degree.

Three-Year Degree Program

In 1996, Fitchburg State College began offering selected students the opportunity to complete their bachelor's degree in three years. This program is primarily for full-time, undergraduate students in the General Studies major although some other majors may be available.

Students who enter this program must have completed at least six credits through Dual Enrollment, Advanced Placement examinations, CLEP examination, or transfer credits.

For further information, contact the Admissions Office.

Program Alternatives

Fitchburg State College students may take advantage of a number of program options designed to help degree candidates tailor their course of studies to best suit their individual wants and needs.

Honors Program

The Honors Program is a coordinated four-year program offering an enriched curriculum for full-time, undergraduate students with very high academic achievements.

Freshmen are invited to join the Honors Program based on their high school grades and preparation, SAT scores, and the recommendations of their secondary teachers.

Sophomores and juniors are invited to join provided they have a cumulative average of at least 3.2.

For further information, see Honors on page 91 in the Undergraduate Program Description section.

Life Experience Credit Award Program

Fitchburg State College offers a Life Experience Credit Award program (LECAP) because it recognizes that some students may have acquired knowledge and skills through life experiences as well as through formal credit courses. This program allows students the opportunity to ask that their life experiences be evaluated as educational experiences and credited towards an undergraduate college degree. Credit may be awarded for academically verifiable college-level learning acquired through professional experiences, service, noncredit structured and community learning and educational travel. For further information call 978-665-3321 or 978-665-3319.

Independent Study

Independent Study allows students to step outside of course offerings and explore a specialized area of study in a challenging and new environment. Students are encouraged to seek out Independent Study opportunities under the guidance and supervision of a professor in whose specialization they wish to study. Independent study programs and the amount of credit earned from them must meet the approval of the professor and the department involved, with final approval coming from the Dean of Curriculum and Instruction (day students) or Dean of Graduate and Continuing Education (evening students). Usually, only three credits of independent study per semester may be attempted. Beyond this, permission must be received from the Dean of Curriculum and Instruction (day students) or Dean of Graduate and Continuing Education (evening students).

CAPS: College Academic Program Sharing

CAPS allows students the opportunity to enroll in up to 30 semester hours of courses at another state college without going through formal registration procedures, thus giving them a chance to enjoy a more varied educational experience.

To participate in this program, degree candidates must:

- Have attained sophomore status
- Have spent at least one semester in residence at FSC
- Be in good academic standing
- Attain approval to enroll in CAPS from chair of major department prior to registering for the semester
- Contact the Registrar's Office for approval if their major is undeclared
- File a CAPS request with the Registrar's Office

PROFILE

Sylvia Charland

Professor in Business Administration
Program Manager of Evening Undergraduate Business Administration Program

Sylvia Charland wears many hats at Fitchburg State College as an instructor, advisor, and curriculum innovator. She teaches Computer Information Systems to undergraduates and serves as the Program Manager and Advisor in the evening Business Administration division. She co-authored the Computer Information System's curriculum to keep pace with today's changing needs of computers in business. Following the college's motto of providing affordable, accessible, and excellent education, Professor Charland piloted a course taught via electronic mail, and is instrumental in the development of a weekend college for continuing education students.

College-Level Examination Program (CLEP), Defense Activity for Nontraditional Educational Support (DANTES), Departmental Examinations, and Advanced Placement

Students entering FSC with college-level training or experience can be tested on college course material to earn credit toward their degree. The FSC examination program is especially valuable for individuals who have had learning experiences outside the college classroom (employment experience, life experience, independent study, etc.) which may come to bear upon their formal academic training.

It is possible to gain up to 60 college credits through the program. For students who score 3, 4, or five on the Advanced Placement Examination, the College grants advanced placement status and credit in the area tested. See the Academic Glossary for the Advanced Placement Courses accepted.

For further information on the FSC examination program, contact the Career Services Center, 3rd floor, Hammond Building, 978-665-3151.

Weekend College

Fitchburg State has designed a program that would allow students to complete a Bachelor of Science Degree in Business Administration by attending classes exclusively on the weekends. The program allows first-time degree-seeking students to complete their degree in as little as five years. Transfer students and those with previous college experience may complete their degree in a shorter timeframe. For more information, contact the Division of Graduate and Continuing Education at 978-665-3181 or e-mail dgce@fsc.edu.

Distance Learning Center

The Distance Learning Center at Fitchburg State College provides students the opportunity to complete college coursework at a distance from the college. Distance Learning courses are offered in a variety of ways. The two most common means include over-the-air courses, taught with a connection to a Fitchburg State instructor (these may involve some on-campus meetings), and courses taught over computer network, in which the student is assigned a faculty mentor who communicates with the student, guides the student's progress and evaluates student work. Distance Learning courses originating from Fitchburg State are taken by students both within and outside the United States. Courses are offered on both the bachelor's and master's levels. Students register for these courses through the Division of Graduate and Continuing Education. Appropriate tuition and fees apply.

Departmental Policies

Behavioral Sciences, Human Services Program: Policies Governing Student Review, Retention and Dismissal, and Field Work Eligibility

Review, Retention, and Dismissal

Admission Into The Human Services Program—Students may enter the Human Services Program (major) either by declaring it as a major upon admission to the college (as a freshman or as an external transfer) or by transferring into the major from another major within the college (internal transfer).

Transferring into the major from another major within the college (internal transfer) necessitates a 2.0 cumulative grade point average, and a determination of suitability for a career in the Human Services field. Suitability will be determined in an interview with one or more Human Services faculty.

Human Services Review Committee—Members of the committee are full-time faculty who teach and/or advise students in the Human Services Program. The committee is responsible for implementing all student related policies of the Human Services Program.

Progress Assessment—All students will be subject to retention review by the Human Services Review Committee following completion of each of the skill component courses listed below. Retention will be based upon suitability for a career in the Human Services field, specifically:

- a cumulative quality point average of 2.5 in required Human Services informational and skill component courses (Informational: Theory, Issues and Practice in Human Services, Introduction to Sociology, General Psychology, Abnormal Psychology, Human Growth and Development; Skill Component: Interviewing Techniques, Social Group Work, and Methods of Case Reporting and Analysis), plus demonstrated writing and oral communication skills
- individual grades of 2.0 or better in the three skill component courses listed above
- demonstrated appropriate Human Services intra-personal and interpersonal behavior, including positive evaluations of student's field practice (150 hours minimum) experiences
- positive written personal statement outlining the student's interest in, strengths and "growth areas" for, and intentions in Human Services

Students whose cumulative Grade Point Average falls between a 2.0 and a 2.49 in Human Services informational and skill component courses, whose grade in each of the skill component courses is at least a 2.0, will be reviewed for retention in the program, and a remedial plan may be developed by the Human Services Review Committee.

Students whose cumulative Grade Point Average in Human Services informational and skill component courses is 2.0 or less, and students who receive less than a 2.0 in Interviewing Techniques, Social Group Work, or Methods of Case Reporting and Analysis, will automatically be reviewed, and a remedial plan developed if advisable. A student who receives less than a 2.0 in any two of these three courses would be deemed inappropriate for the program, and would typically be dismissed. In addition, students who fail to demonstrate appropriate intrapersonal and interpersonal behaviors will be reviewed for dismissal from the program.

If a student's dismissal from the Human Services Program is warranted after review by the Human Services Review Committee, the student will be informed in writing as to: (a) the reason for dismissal, and (b) the procedure for appeal. The Human Services Review Committee will notify the chairperson of the Behavioral Sciences Department, who will then recommend to the Vice President of Academic Affairs that said student not be retained in the Human Services Program.

Field Work Eligibility—Successful completion of Field Work is required for graduation from the Human Services major. Admission into the major, however, does not guarantee a student's entry into Field Work. Eligibility for Field Work is based upon the successful completion of the following requirements:

- Student attends scheduled meetings for Field Work planning and registration, and required preparatory workshops on practical interviewing and resume writing, during the semester before Field Work is undertaken
- Student has current professional liability insurance coverage (automatic upon enrollment in the Field Work course)
- Student completes the application process for Field Work in a timely manner

Student meets the following eligibility criteria:

- A cumulative grade point average of at least 2.5 in the required Human Services informational and skill component courses, and individual grades of at least 2.0 in the three skill component courses
- Demonstrated effectiveness in written and oral communication skills
- Demonstrated intrapersonal and interpersonal behavior that is appropriate for a human services worker
- Positive recommendations by a majority of faculty members in the Human Services Program
- No incomplete grades in any courses, no probationary status, and no unresolved failures in the student's major field of study
- Successful completion of the courses Social Group Work and Methods of Case Reporting and Analysis at least one semester before beginning of Field Work
- A minimum of 150 hours of supervised experience in practice, including at least three different types of experiences in at least two different placements/settings

- Twelve semester hours, with a minimum of three faculty members, in the Human Services Program
- If a transfer student, meets the residency requirement of at least one full semester of course work in the Human Services Program following admission to the Program and prior to the semester in which Field Work is to be conducted

Students who do not meet these specific eligibility criteria for Field Work may request, in writing, that the Human Services Review Committee waive the policy in question. Applications for waivers must be submitted at the same time as the application for Field Work.

Progress Review

Clinical Laboratory Sciences Department

Technical Standards for Admission

The Department of Clinical Laboratory Sciences faculty have specified the following nonacademic criteria (technical standards or essential functions) that all applicants are expected to meet in order to participate in the program and in professional practice.

Physical Criteria

With or without reasonable accommodations, the applicant must be able to participate actively in all demonstrations, laboratory exercises, and clinical experiences. To do this, the applicant must have sufficient motor skills to operate delicate instruments and to perform delicate procedures. The applicant must have good hand-eye coordination; normal vision with or without correction; sufficient color vision to identify structures within stained cell preparations and to distinguish shades of color in manually read biochemical reactions. The applicant must have the ability to move around the student labs and clinical facilities unassisted.

Behavioral Criteria

The applicant must possess the emotional health necessary to work quickly and accurately under pressure; to be flexible and able to adapt to the changing environment associated with the inherent uncertainties of clinical situations. The applicant must be able to communicate effectively and sensitively with patients, faculty, fellow students, and members of the health care team in order to elicit and transfer information. The applicant must possess the maturity to exercise ethical judgment, honesty, dependability and accountability, and to maintain patient confidentiality.

Intellectual Criteria

The applicant must be able to think critically and logically and be able to correlate information in order to solve problems associated with clinical practice. To do this the applicant must be able to measure, calculate, reason, analyze, evaluate, and synthesize. The applicant must be able to organize tasks and carry them out in a logical, thorough, and efficient manner.

Progress Review

Students are evaluated twice for continuance in the Clinical Laboratory Sciences major. Upon completion of 60 semester hours or upon completion of the core curriculum for the freshman and sophomore years, the program director calculates the GPA in the core curriculum courses. Upon completion of 90 semester hours or upon completion of the curriculum for the freshman, sophomore, and junior years, the program director again calculates the GPA in the core curriculum courses. (See Clinical Laboratory Sciences Program.)

- Students with a GPA of 2.5 or above in the Clinical Laboratory Sciences core curriculum continue in the major.
- Students with a GPA of less than 2.0 are referred to the Dean of Undergraduate Studies with the recommendation that they not be retained in the Clinical Laboratory Sciences major.
- Students with a GPA of 2.0 to 2.49 in the core curriculum are referred to the Clinical Laboratory Sciences Appeals Committee for academic review. The committee may recommend some actions that the student must take in order to remain in the major or may recommend that the student not be retained in the major.

Appeal Mechanism for Committee Review

- A student who has been referred for academic review must submit a written petition to the Clinical Laboratory Sciences Appeals Committee. With the letter of petition, the student may also submit letters of support from his/her academic advisor, instructors, and any other pertinent information which may be relevant to the situation. The Committee reviews the student's record and recommends whether or not the student should continue in the major. If students do not submit a written petition to the Appeals Committee, then their names are referred to the Dean of Undergraduate Studies with the recommendation that they not be retained in the Clinical Laboratory Sciences major.
- After academic review, the Appeals Committee forwards to the Dean of Undergraduate Studies the names of those students for whom the Committee recommends dismissal from the program. The student is notified in writing of the final decision of the Committee.
- A student who has been allowed to continue in the program after appeal and fails to maintain a 2.5 GPA in the Clinical Laboratory Sciences core curriculum may not petition again for reinstatement. Their names are forwarded to the Dean of Undergraduate Studies with the recommendation that they be dropped from the Clinical Laboratory Sciences major.

Communications/Media Department

Students are evaluated twice for continuation in Communications/ Media Department by the Communications/ Media Review Committee: once after completing 60 semester hours or upon completion of Communication Theory, Message Design, and the first course in the concentration (Introduction to TV Production, Film Production I, Graphic Design I, Photography I, and Public Relations), then again after 90 semester hours. The review committee consists of the advisor, a conceptual/methodological instructor, and the instructor of the appropriate above-stated concentration course.

Guidelines for review after completing 60 semester hours

- The advisor calculates the GPA in Communications/Media
- Students with a 2.5 GPA or higher in major are able to continue in the major
- Students with less than a 2.0 are referred to the Chair with a recommendation that the Dean of Curriculum and Instruction drop them from the Communications/Media major
- Students receiving between a 2.0 and 2.49 are referred to the department review committee
- Evaluation of academic performance in above stated courses
- Determination of career expectations
- Review of samples of work
- Measure of professional attitude
- Interview between student and review committee

Actions of the Communications/Media Review Committee

If the committee determines that the individual should be permitted to take additional courses to boost GPA to 2.5, then the student may take up to three additional courses in Communications/Media. If, upon completion of any or all of the three courses, the individual achieves the 2.5 GPA in Communications/Media, the individual may continue in the major.

If the individual fails to achieve the 2.5 GPA in Communications/ Media, a recommendation that the individual be dropped from the program is forwarded to the Dean of Curriculum and Instruction. In the event of a split decision, the chair selects a third person to review the above information and to render a decision while in consultation with the other two committee members.

Rules of the Review Committee

The review committee meets on the first Monday evening following the start of a semester to perform reviews and make decisions about students' eligibility to continue in the program. The chair notifies the advisor and concentration professor if the committee is unable to meet.

Those individuals reviewed by the review committee are notified of the committee's decision no later than three days after the committee has made its determination.

Aside from their duties to the committee, advisors provide career and portfolio counseling during the semesters prior the senior year.

Guidelines for review after completing ninety semester hours

Upon completion of 90 semester hours, students are reviewed for eligibility to participate in an internship program. Eligibility requirements are:

- A 2.5 GPA in Communications/Media
- If GPA is below 2.5, students must complete additional Communications/Media courses to bring their GPA up to required level or submit an application for a waiver from the 2.5 GPA requirement

Internships are described in the *Communications/Media Internship Handbook*.

Nursing

Students in the Nursing Program must achieve a 2.0 or better in all required nursing courses to be in good standing in the major and progress to the next semester. All students in the nursing major must achieve at least 2.0 in Anatomy and Physiology I and II and General Chemistry I and II to be eligible to enroll in Scientific Foundations for Nursing Interventions I, Nutritional Foundations for Nursing Interventions, and/or Nursing Process with the Well Client I. Students in the major may repeat a failed nursing course one time. Failure to achieve a 2.0 when a course is repeated results in dismissal from the major. The repeat policy may be used one time during the course of study.

Teacher Preparation Programs

All students enrolled in degree programs in education must formally apply to the teacher preparation program of their choice. This occurs at the end of their third semester or upon completion of forty-four credits. Acceptance criteria include:

- A 2.5 GPA
- Application submitted to Teacher Certification Office
- Enrollment in or completion of at least one introductory course in a teacher preparation program of choice
- Positive recommendations from the department advisor and faculty

Student Teaching and Advanced Provisional/Standard Certification

To participate in the Practicum of their program, students must meet the following criteria:

- A 2.5 average in the professional field of study
- Application submitted to Teacher Certification Office
- Receive the recommendation of the majority of faculty members in their major or area of specialization
- Demonstrate effectiveness in both oral and written communication skills
- Successfully complete the tuberculin screening test

In addition, the Teacher Education Council has the following requirements for student teaching:

- Incompletes, probationary status, unresolved failure in a major and/or course overload during the student teaching period are not permitted
- An incomplete or failure in student teaching necessitates the repetition of the course
- Each student must furnish his or her own transportation to teaching assignments
- All transfer students are required to take 12 semester hours from at least three different professors within their respective departments prior to student teaching
- A student convicted of a felony, as defined by the courts of any state, is automatically ineligible for a teacher education program. Appeals on either of these points should be directed to the Secretary of the Teacher Education Council.

All teacher education majors are responsible for checking both graduation and standard or provisional with advanced standing certification requirements at the beginning of the year of completion. Certification procedures will be discussed at scheduled meetings every semester.

Undergraduate Day Programs

Undergraduate Day Programs

The College has eighteen Academic Departments, each headed by a Department Chair. Each department has responsibility for one or more majors or degree programs, several tracks within the major and several minors. In the following section, the requirements for majors and minors are outlined under each discipline. Required and elective courses in each discipline are defined to help students with course selection.

Academic advisors should always be consulted to ensure that courses are taken in the appropriate sequence and are fulfilling all the requirements needed for graduation. Please make an appointment with the Department Chairperson for special information about application for admission into a particular major or minor.

Departments	Majors/Concentrations/Tracks	Minors
Bold indicates disciplines available as a major.		
Behavioral Science	**Human Services** Criminal Justice **Psychology** Developmental Psychology Industrial/Organizational Psychology **Sociology**	Criminal Justice Industrial/Organizational Psychology Psychology Public Service Management Sociology Women's Studies
Biology	**Biology** Exercise Science Environmental Science Secondary Education	Biology
Business Administration	**Business Administration** Accounting Fitness Management Management Marketing **Computer Information Systems**	Business Administration Public Service Management
Chemistry	**Chemistry**	Chemistry
Clinical Lab Sciences	**Clinical Lab Sciences** Clinical Chemistry Clinical Microbiology Medical Technology	
Communications/Media	**Communications/Media** Film/TV Production Photography Technical Communication Graphic Design	Graphics
Computer Science	**Computer Science** **Computer Information Systems**	Computer Science
Early Childhood, Elementary, Middle School and Secondary Education	**Early Childhood** **Elementary** **Middle School** **Bilingual Elementary Education**	
English/Speech	**English** Literature Professional Writing Secondary Education Theater	African-American Studies English Theater Women's Studies
Geo/Physical Sciences	**Earth Science** Earth Science/Secondary and Middle School Education **Geography**	Geography/Earth Science Physics
	General Studies (Interdisciplinary)	
Humanities	**General Studies** (Humanities) General Studies/Crafts	Art French German Music Philosophy Spanish
Industrial Technology	**Industrial Technology** Architectural Technology Construction Technology Electronics Engineering Energy Engineering Technology Manufacturing Engineering Graphic Arts Technology Technical Theater Arts **Technology Education**	Industrial Technology Graphics Industrial Training

(Continued from previous page)

Departments	Majors/Concentrations/Tracks	Minors
Bold indicates disciplines available as a major.		
Mathematics	**Mathematics** Secondary Education	Mathematics
Nursing	**Nursing**	
Physical Education	Exercise Science Fitness Management	Dance Physical Education
Social Science	**Economics** **History** History/Secondary Education **Political Science** U.S. Politics and Law International	African-American Studies Criminal Justice Economics History International Studies Political Science Public Service Management Women's Studies
Special Education	**Special Education** Teacher of Students with Special Needs/Elementary PreK-6 Teacher of Students with Intensive Special Needs/Elementary 1-6	

Majors/Degrees/Tracks

Bilingual Education
BS Education

Biology
BA Biology
BS Biology
- Biology/Environmental Science
- Biology/Exercise Science

† Biology Secondary Education Program

Business Administration
BS Business Administration
- Accounting
- Fitness Management
- Management
- Marketing

Chemistry
BA Chemistry
BS Chemistry

Clinical Laboratory Science
BS Clinical Laboratory Science

Communications/Media
BS Communications
- Graphic Design
- Film/TV Production
- Photography
- Technical Communication

Computer Science
BS Computer Science
BS Computer Information Systems

Early Childhood Education
BS Education
† Early Childhood Education Program

Economics
BS Economics

Elementary Education
BS Education
† Elementary Education Program

English
BA/BS Literature
BA Professional Writing
BA Theater
† English Secondary Education Program

General Studies
BA General Studies
BS General Studies

Geography
BA Geography
- Geography
- Earth Science

BS Geography
- Geography
- Earth Science

† Earth Science Secondary Education Program

History
BA History
BS History
† History Secondary Education Program

Human Services
BS Human Services

Industrial Technology
BS Industrial Technology
- Construction Technology
- Electronics Engineering
- Graphic Arts Technology
- Manufacturing Engineering
- Architectural Technology
- Energy Engineering Technology

Technology Education
† Technology Secondary Education Program

Mathematics
BA Mathematics
BS Mathematics
† Mathematics Secondary Education Program

Nursing
BS Nursing

Political Science
BA Political Science
BS Political Science

Psychology
BA Psychology
BS Psychology

Sociology
BA Sociology
BS Sociology

Middle School Education
BS Education
† Middle School Education Program

Special Education
BS Education
† Special Education Program
Teacher of Students with Special Needs (pre-K-9)/Elementary Teacher
Teacher of Students with Special Needs (5-12)/Elementary Teacher
Teacher of Students with Intensive Special Needs (all levels)/Elementary Teacher

† State regulations require a liberal arts or science major in addition to all professional education programs.

African-American Studies

Chairpersons
Pasquale Micciche
Nancy Yee

Objectives for the African-American Studies Program

The interdisciplinary program in African-American Studies provides courses which examine the cultures, history, and literature of African-American peoples. This course work provides students with new perspectives on the significant roles played by these peoples.

Requirements for the Minor in African-American Studies

This interdisciplinary program requires a minimum of 18 credits. Students may use no more than two of their major courses toward the minor.

Required Courses
AAST 1000 Introduction to African-American Studies
Select One:
AAST/HIST 2300 African American History
AAST/HIST 2930 Modern African History
AAST/HIST 2520 History of African American Women
Select One:
AAST/ENG 2670 20th Century African American Literature
AAST/ENG 2650 Other Voices
Electives (select 3)
AAST/HIST 2300 African American History
AAST/HIST 2930 Modern African History
AAST/HIST 2520 History of African American Women
AAST/ENG 2650 Other Voices
AAST/ENG 2660 19th Century African American Literature
AAST/ENG 2670 20th Century African American History
AAST/SOC 2510 Peoples and Cultures of Africa
AAST/MUSC 3800 History of Jazz
AAST/PHED 1310 Afro Jazz Dance
Independent Studies or Topics courses that are pertinent to the minor can be selected in consultation with the coordinators of this African-American Studies Minor.

Art

Chairperson
Jane Fiske

Professors
Donna Bechis

Assistant Professor
Susan Wadsworth

Objectives for the Program in Art

The Art Program provides undergraduates with a variety of studio and historical art courses. Worcester Center for Crafts (listed separately) cosponsors a major with the program.

Requirements for the Minor in Art

The Minor in Art requires a minimum of 18 semester hours, including the following:

Required Courses
ART 1400 Drawing
ART 1600 Design
ART 1650 Three-Dimensional Design
Elective Courses (select 2)
ART 1150 Survey of Art Forms I
ART 1160 Survey of Art Forms II
ART 1720 Contemporary Art
Studio Elective Course (select 1)
ART 1450 Introduction to Painting
ART 1840 Introduction to Sculpture
ART 2450 Water-Based Media

Biology

Chairperson
Robert Zottoli

Professors	***Associate Professors***	***Assistant Professor***
Neal Anderson	*Alice O'Malley*	*Margaret Iloey*
George Babich	*Edward Armstrong*	
George Bond		
Stanley Dick		
Stanley Krane		
Rose Marie Neunherz		
Howard Thomas		
Robert Zottoli		

Objectives for the Program in Biology

The Biology Department provides undergraduates who wish to major or minor in Biology a variety of courses that can be applied to their specialized major. The department also offers courses in laboratory science for students in all other majors.

Requirements for the Major in Biology

All students in either the Bachelor of Science or Bachelor of Arts programs in Biology are offered a required core sequence of courses:

BIOL	*1800*	*General Biology I*
BIOL	*1900*	*General Biology II*
BIOL	*2300*	*Ecology*
BIOL	*2800*	*Genetics*
BIOL	*3250*	*Cell Biology*
BIOL	*3550*	*Developmental Biology*

In addition, 12 semester hours of additional biology electives at or above the 2000 level are required of biology majors. Electives may be chosen in an area of specialization in consultation with a faculty advisor.

Finally, BA and BS students are required to take courses in related sciences and two courses in mathematics at or above the level of MATH 1250. BA students are required to have foreign language proficiency at the Intermediate level.

Required Courses in Related Sciences

CHEM	*1300*	*General Chemistry I*
CHEM	*1400*	*General Chemistry II*
CHEM	*2000*	*Organic Chemistry I*
CHEM	*2100*	*Organic Chemistry II*
PHYS	*1300*	*General Physics I*
PHYS	*1400*	*General Physics II*

Specializations for the Major in Biology

Provisional Certification for Teaching Biology

Students interested in teaching Biology on the secondary level need to complete the provisional certification track. The requirements are as follows:

PSY	*2230*	*Adolescent Psychology (LAS)*
BIOL	*2860*	*Introduction to Secondary School Teaching*
ENGL	*4700*	*Teaching Writing in Secondary Schools*
BIOL	*4850*	*Special Methods in Biology*
BIOL	*4940*	*Biology Practicum in a Secondary School (300 hrs.)*

BS in Biology/Environmental Science

The Bachelor of Science in Biology/Environmental Science includes all requirements of the BS in Biology.

Additional requirements are:

- BIOL 4950 Internship in an Environmental Science area
- Six semester hours of Earth Science or Geology
- Three semester hours in Computer Science

For students concentrating in Environmental Science, the Department recommends that, subject to availability, Liberal Arts and Sciences be partially fulfilled by courses in Geography, Macroeconomics, Environmental Law, Photography, Drawing, Ethics, and Technical Writing.

BS in Biology/Exercise Science

(See Physical Education.)

All students in the Bachelor of Science in Biology/Exercise Science are offered a required core sequence of the following biology and physical education courses:

BIOL	*1800*	*General Biology I*
BIOL	*1200*	*Anatomy and Physiology II*
BIOL	*1300*	*Developmental Biology*
BIOL	*1650*	*Nutrition*
BIOL	*2800*	*Genetics*
BIOL	*3250*	*Cell Biology*
BIOL	*3450*	*Biochemistry*
PHED	*3070*	*Exercise Physiology*
PHED	*4040*	*Motor Learning*
PHED	*4120*	*Biomechanics of Sport*
PHED	*4950*	*Internship*

Requirements for the Minor in Biology

The minor in Biology enables students to demonstrate a substantial and coordinated subsidiary expertise in biological sciences. The minor in Biology requires a minimum of 18 semester hours of course work as follows:

One year (6 or 8 semester hours) of any of the entry-level Biology sequences:

BIOL	*1000*	*Life Science I* ***and***
BIOL	*1100*	*Life Science II* ***or***
BIOL	*1200*	*Anatomy and Physiology I* ***and***
BIOL	*1300*	*Anatomy and Physiology II* ***or***
BIOL	*1800*	*General Biology I* ***and***
BIOL	*1900*	*General Biology II*

Ten semester hours of 2000, 3000, 4000-level courses selected after consultation with a minors advisor in the Biology Department.

Business Administration

Chairperson
James T. Noonan

Professors	***Associate Professors***	***Assistant Professor***
Howard Cox	*Diane Caggiano*	*David Carey*
Louis Zivic	*Sylvia Charland*	*James Conlin*
	Joseph McAloon	*John McKeon*
	James Noonan	*Francis Morrison*
	Janette Purcell	*Gary Vostok*
	Harold Schonbeck	*Timothy Shea*
	Charles Wellens	

Objectives for the Program in Business Administration

The Business Administration Department prepares each student to take a responsible position within the world of business equipped with a knowledge of business theories, policies, and procedures.

The curriculum is based in the liberal arts, coupled with professional courses and a variety of practical business experiences including the opportunity for experiential learning through internships, structured to give the participant an opportunity to apply the theory of the classroom to a specific work experience.

Montachusett Economic Center

The Montachusett Economic Center (MEC), started at Fitchburg State College in 1981, employs college students and professors to provide management and marketing assistance to a wide variety of local businesses and organizations. These endeavors take the form of marketing research projects, management and marketing audits, small business assistance, seminars, and on-line database searches.

Requirements for the Major in Business Administration

Concentrations/Options

The Business Administration Program at Fitchburg State College includes concentrations in one of five areas of business: accounting, management, marketing, fitness management, or CIS (Computer Information Systems).

Core Curriculum

BSAD	*2010*	*Introduction to Financial Reporting*
BSAD	*2020*	*Introduction to Managerial Accounting*
BSAD	*3200*	*Principles of Management*
BSAD	*3300*	*Fundamentals of Marketing*
BSAD	*3400*	*Basic Finance*
BSAD	*3500*	*Business Law I*
BSAD	*4890*	*Business Policy and Strategy*

Liberal Arts and Sciences Requirements

SPCH	*1000*	*Speech*
ECON	*1000*	*Macroeconomics*
ECON	*1200*	*Microeconomics*
BSAD	*1700*	*Introduction to Computer Information Systems for Business*
MATH	*1800*	*Business Statistics*
MATH	*2200*	*Calculus for Business*

The courses beyond the core curriculum are open only to Business Administration majors. These upper-level courses are not transferable from another college if they are required within a student's concentration.

Specializations for the Major in Business Administration

Accounting Curriculum

BSAD	*3010*	*Financial Reporting Theory and Practice I*
BSAD	*3020*	*Financial Reporting Theory and Practice II*
BSAD	*3120*	*Cost Accounting I*
BSAD	*3130*	*Cost Accounting II*
BSAD	*4010*	*Financial Reporting Theory and Practice III*
BSAD	*4120*	*Individual Taxation*
BSAD	*4140*	*Auditing*
BSAD	*4500*	*Business Law II*

One Directed Advanced Elective from the following:

BSAD	*4100*	*Consolidations and Mergers* ***or***
BSAD	*4130*	*Corporate, Estate, and Gift Taxation* ***or***
BSAD	*4160*	*Not-for-Profit Accounting*

Management Curriculum

BSAD	*3210*	*Human Resources Management*
BSAD	*3220*	*Production Management*
BSAD	*4200*	*Organizational Behavior and Theory*
BSAD	*4210*	*Social and Political Environment of Business*
BSAD	*4230*	*Business Fluctuations and Forecasting*
BSAD	*4880*	*International Business Management*

Marketing Curriculum

BSAD	*3310*	*Consumer Behavior*
BSAD	*3320*	*Market Research*
BSAD	*3330*	*Advertising*
BSAD	*4880*	*International Business Management*

In addition, three marketing electives (from list below) are also required:

BSAD	*4300*	*Sales Management*
BSAD	*4310*	*Retail Marketing*
BSAD	*4320*	*Industrial Marketing*
BSAD	*4330*	*International Marketing*
BSAD	*4340*	*Developing Marketing Strategies*

Business/Fitness Management
(See Physical Education.)

BIOL	*1200*	*Anatomy and Physiology I*
BIOL	*1300*	*Anatomy and Physiology II*
BIOL	*1650*	*Nutrition or*
PHED	*3060*	*Exercise, Nutrition and Heart Disease*
PHED	*2090*	*First Aid*
PHED	*2091*	*CPR*
PHED	*3070*	*Exercise Physiology*
PHED	*4030*	*Physical Education Fitness and Sport: An Overview*
PHED	*4170*	*Exercise Testing and Prescription*
BSAD	*4880*	*International Business Management*
PHED	*4950*	*Internship Fitness Management*
		Physical Education Elective (Choose any one physical activity or dance elective.)

Business/Computer Science: Computer Information Systems Curriculum
(See Computer Information Systems.)

Requirements for the Minor in Business Administration

The minor in Business Administration consists of 18 credits. The following four courses are required:

BSAD	*2010*	*Introduction to Financial Reporting*
BSAD	*3200*	*Principles of Management*
BSAD	*3300*	*Fundamentals of Marketing*
BSAD	*3500*	*Business Law I*

Two business electives must also be taken. Two of the four required courses may be transferred from another college. Students minoring in Business Administration may take a maximum of two upper-level courses. These courses must be taken at Fitchburg State College and they must be approved by the Department Chairperson.

Chemistry

Chairperson
Pushkar Kaul

Professors
Judith Ciottone
Pushkar Kaul
Daniel V. Robinson

Associate Professors
Da-hong Lu
Meledath Govindan

Objectives for the Program in Chemistry

The Chemistry Program provides courses that fulfill the Laboratory Science requirement in Liberal Arts and Sciences. Students may also earn a Bachelor of Science or a Bachelor of Arts degree in Chemistry, or they may select a Chemistry minor.

Requirements for the Major in Chemistry

The Core Requirements for the Bachelor of Arts and the Bachelor of Science in Chemistry include:

CHEM	*1300*	*General Chemistry I*
CHEM	*1400*	*General Chemistry II*
CHEM	*2000*	*Organic Chemistry I*
CHEM	*2100*	*Organic Chemistry II*
CHEM	*3000*	*Analytical Chemistry I*
CHEM	*3500*	*Analytical Chemistry II*
CHEM	*3200*	*Physical Chemistry I*
CHEM	*3300*	*Physical Chemistry II*
PHYS	*1300*	*General Physics I*
PHYS	*1400*	*General Physics II*
MATH	*2300*	*Calculus I*
MATH	*2400*	*Calculus II*

Three semester hours of Chemistry electives at or above CHEM 3600, Advanced Inorganic Chemistry, Forensic Chemistry, or Natural Products. General Physics III is recommended for all Chemistry majors. Proficiency in German, French, or Russian at the second-year level is required for the Bachelor of Arts. Introduction to Pascal and Data Structures are additional requirements for the Bachelor of Science.

Requirements for the Minor in Chemistry

A Minor in Chemistry consists of:

CHEM	*1300*	*General Chemistry I*
CHEM	*1400*	*General Chemistry II*
CHEM	*2000*	*Organic Chemistry I*
CHEM	*2100*	*Organic Chemistry II*
CHEM	*3000*	*Analytical Chemistry I*

One course selected from Analytical Chemistry II, Physical Chemistry I, Physical Chemistry II, Advanced Inorganic Chemistry, Radiation Chemistry, or Forensic Chemistry, or Natural Products.

Clinical Laboratory Sciences

Chairperson
Dorothy Boisvert

Professor	***Associate Professor***	***Assistant Professors***
Dorothy Boisvert	*Wanda Roguski*	*David Grenache*
		Elizabeth Szymczak

Objectives for the Program in Clinical Laboratory Sciences

The Clinical Laboratory Sciences major prepares students to obtain positions in hospital, research, industrial, zoological, and private laboratories as well as to become sales and technical representatives for a variety of industrial corporations. Students are eligible to take certification exams given by the National Certification Agency for Medical Laboratory Personnel, American Society of Clinical Pathologists, and other national agencies. The program is fully accredited by the National Accrediting Agency for Clinical Laboratory Sciences.

Requirements for the Major in Clinical Laboratory Sciences (Medical Technology)

Students in the Clinical Laboratory Sciences major develop skills in the basic sciences that serve as the foundation upon which their clinical courses are built. During the first three years, students are introduced to the profession of Clinical Laboratory Science and the clinical courses necessary to practice in the profession. During senior year, students take advanced courses in Clinical Laboratory Science. Skills are developed in well-equipped, modern laboratories similar to those found in both hospital and industrial settings.

Students may choose one of three tracks—Medical Technology, Clinical Chemistry, or Clinical Microbiology.

All students in the CLS program are required to take the following courses:

Core Requirements

BIOL	*1800*	*General Biology I*
BIOL	*2800*	*Genetics*
BIOL	*3900*	*Microbiology*
BIOL	*4810*	*Immunology*
CHEM	*1300*	*General Chemistry I*
CHEM	*1400*	*General Chemistry II*
CHEM	*2000*	*Organic Chemistry I*
CHEM	*2100*	*Organic Chemistry II*
CSC	*1100*	*Computer Applications Programming*
MATH	*1700*	*Applied Statistics*
PSY	*2640*	*Performance Appraisal and Development*
CLS	*1000*	*Introduction to Clinical Laboratory Sciences*
CLS	*2100*	*Basic Lab Skills*
CLS	*3000*	*Professional Issues*
CLS	*3200*	*Immunoassay/Clinical Virology*
CLS	*3100*	*Human Biochemistry I*
CLS	*3150*	*Human Biochemistry II*

Specializations for the Major in Clinical Laboratory Sciences

Medical Technology Track

CLS	*2000*	*Basic Hematology*
CLS	*3400*	*Parasitology/Mycology*
CLS	*4000*	*Clinical Hematology I*
CLS	*4050*	*Clinical Hematology II*
CLS	*4200*	*Clinical Chemistry I*
CLS	*4250*	*Clinical Chemistry II*
CLS	*4400*	*Clinical Microbiology I*
CLS	*4450*	*Clinical Microbiology II*
CLS	*4600*	*Immunohematology I*
CLS	*4650*	*Immunohematology II*
CLS	*4800*	*Clinical Correlations I*
CLS	*4850*	*Clinical Correlations II*

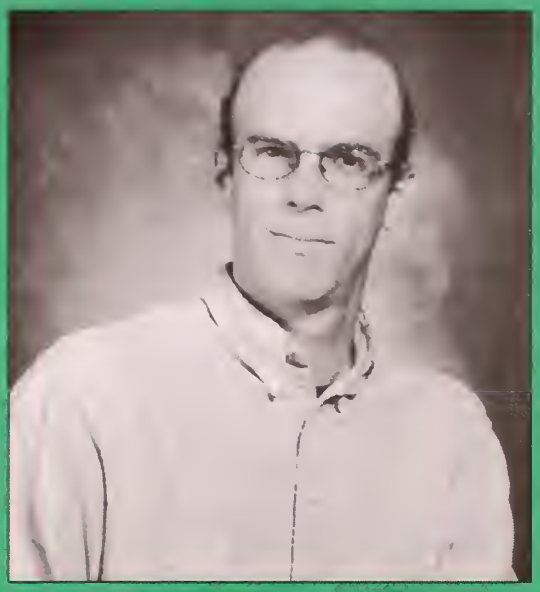
Clinical Chemistry Track

CHEM	*3000*	*Analytical Chemistry I*
CHEM	*3500*	*Analytical Chemistry II*
CLS	*2000*	*Basic Hematology*
CLS	*4200*	*Clinical Chemistry I*
CLS	*4250*	*Clinical Chemistry II*
CLS	*4300*	*Issues in Clinical Chemistry I*
CLS	*4350*	*Issues in Clinical Chemistry II*

Clinical Microbiology Track

CLS	*3400*	*Parasitology/Mycology*
CLS	*4400*	*Clinical Microbiology I*
CLS	*4450*	*Clinical Microbiology II*
CLS	*4100*	*Issues in Clinical Microbiology I*
CLS	*4150*	*Issues in Clinical Microbiology II*

PROFILE



David Faulkner

Undergraduate Student in Communications—Video/Film Production

David, a veteran of the Gulf War, is attending Fitchburg State on the GI Bill. His position as a videographer in the Marines led him to pursue a degree in Video/Film production. His exceptional filming talent and experience, gained while spending a year on board a research vessel shooting with an IMAX crew, earned him a Student Emmy Award for an environmental documentary about South Georgia Island. The video also won a first place for documentary at the Ft. Lauderdale Film Festival. This in turn led to an invitation to participate at the Cannes International Film Festival in France as an "emerging filmmaker" in the American Pavilion under Eastman Kodak's sponsorship. Both in class and out, David devotes his time to filming, acting, and producing—a chosen career that promises to be fulfilling and rewarding.

Communications/Media

Chairperson
Wayne Munson

Professors	***Associate Professors***	***Assistant Professors***
George Bohrer	*Elliot Hoffman*	*LeAnn Erickson*
Lee DeNike	*Bonnie House*	*Gunther Hoos*
Peter Laytin	*Ann Mrvica*	
Helen Obermeyer Simmons	*Wayne Munson*	
David Ryder		
Charles Sides		

Objectives for the Program in Communications/Media

The Communications/Media Program prepares individuals to assume communication positions as freelancers, independent producers, or employees of corporations, institutions, and media organizations.

The program provides a blend of the principles and practices necessary for the effective design, production, and evaluation of media for information presentation by graphic, photographic, film, video, electronic, and print technologies. In combination with the Liberal Arts and Sciences Program, Communications/Media fosters the development of skills critical to adapting to an ever changing technological and knowledge-based society.

The "Visions" Honors Show

Each April the Communications/Media Department faculty hosts a juried honors exhibit of the best student work from all concentrations. Photographic, written, interactive, and graphic works are displayed in the campus gallery, while films, videotapes, and multi-image programs are shown in the campus screening room. "Visions" is an important recognition of the professional and artistic work done by Communications/Media students.

Requirements for the Major in Communications/Media

The Bachelor of Science degree in Communications/Media requires 54 semester hours. Course requirements are organized into five phases.

Phase I Freshman Introductory Requirements

Phase I exposes students to the foundations, concepts, and practices used in the preparation, delivery, evaluation, and research of verbal and visual messages.

Required Courses

COMM 1105 Systems and Theories of Communication
COMM 1120 Message Design

Phase II Applied Concentration

Phase II enables students to become involved with an in-depth investigation of an area in communications which is most closely aligned with individual talents and interests. Students must select and complete one concentration with the consent of their advisor. A minimum of five required courses must be taken within a concentration.

Film/Video Production Concentration

Required Courses

COMM 3505 Introduction to Film and Video
COMM 3580 Studio Lighting and Production

Film Required Courses

COMM 3710 Intermediate Film Production
COMM 3720 Advanced Film Production
COMM 3740 Advanced Digital Production

Video Required Courses

COMM 3520 Intermediate Video Production
COMM 3540 Advanced Film Production
COMM 3740 Advanced Digital Production

Elective Courses

COMM 2320 Script Writing
COMM 3530 Postproduction
COMM 3550 Production Management
COMM 3730 Directing Video/Film

Graphic Design Concentration

Required Courses

COMM 3810 Graphic Design I
COMM 3820 Graphic Design II
COMM 3890 Computer Graphic Design
COMM 4270 Pre-press Production

Elective Courses

COMM 2330 Color Theory
COMM 3830 Graphic Design III
COMM 3840 Graphic Management
COMM 3850 Publication Design
COMM 3880 Typography
COMM 3900 Graphic Design Photography
COMM 3910 Graphic Arts Production
COMM 3920 Advanced Computer Graphic Design

Photography Concentration

Required Courses

COMM 3600 Photography I
COMM 3610 Photography II
COMM 3620 Photography III
COMM 3630 Large Format Photography
COMM 3645 Digital Photography

Elective Courses

COMM 3640 Color Photography
COMM 3660 Photo Management
COMM 3680 Slide Production Techniques
COMM 3690 Photography Seminar

Technical Communication Concentration

Required Courses

COMM 3430 Writing for Advertising
COMM 3460 Public Relations
COMM 3470 Technical Documentation
COMM 3304 Multimedia Project Design
COMM 3860 Writing for Business and Technology

Elective Courses

COMM 2320 Script Writing
COMM 2800 Journalism
COMM 3870 Feature and Magazine Writing

Note: It is recommended that students take the history course related to their concentration as part of their Liberal Arts and Sciences program. These courses include History of Film, History of TV, and History of Graphic Design.

Phase III Advanced Electives

Following or concurrent with Phase II, students, in consultation with their advisor, select one of the following options:

- Four additional courses in the same concentration
- Four courses in another concentration
- Four courses from a combination of concentrations, including additional theory, conceptual, or methodological courses
- The multimedia module

COMM 3304 Multimedia Project Design
COMM 3305 Multimedia Tools and Techniques
COMM 3306 Interactive Media
COMM 3307 Multimedia Production
COMM 3890 Electronic Graphic Design
COMM 3308 Multimedia Seminar

Phase IV Upper-Level Theory/Conceptual/Methodological Requirements

Students in their junior/senior year will take the following:

Media Workplace Dynamics

Requirement

COMM 4200 Human Communications Technology

Junior Writing Requirement (Select One)

COMM 2800 Journalism
COMM 3860 Writing for Business and Technology
COMM 4240 Media Criticism

Electives (Select One)

COMM 4210 Instructional Training Design
COMM 4220 Organizational Communication
COMM 4230 Communications Law and Ethics
COMM 4240 Media Criticism
(unless used for junior writing requirement)
COMM 4250 Research Seminar
COMM 4205 Seminar in Communication Theory

Communications Studies Concentration

This concentration provides for advanced studies of the theoretical constructs necessary for strategic analysis, design, application, research, and evaluation of a variety of media systems. It provides foundational preparation for graduate studies in communications and a number of allied fields.

Requirements: Phase I and II, plus the following courses from Phases III and IV: COMM 4230, COMM 4240, COMM 4250, 2–3 electives, and Phase V.

Phase V Integrated Studies

This required senior level phase provides an opportunity for students to apply their knowledge and skills in a professional environment.

Required Course

COMM 4880 Internship

Enrichment Courses

COMM 4260 Advanced Professional Study
COMM 4901 Independent Study
COMM 4902 Independent Study
COMM 4903 Independent Study
COMM 4906 Independent Study
COMM 4940 Field Study
COMM 4950 Field Study

Requirements for the Minor in Communications/Media

An interdisciplinary minor in graphics is offered in conjunction with the Computer Science and Industrial Technology Departments. See Graphics in this catalog for an explanation of program requirements.

Computer Information Systems

Chairpersons
Robert McGuire
James Noonan

Objectives for the Program in Computer Information Systems

The program is designed to prepare students to be systems analysts, programmers, project managers, business analysts, and consultants in business settings by providing them with the opportunity to learn business and computer skills.

Requirements for the Major in Computer Information Systems

The Computer Information Systems Program offers an interdisciplinary major which incorporates courses from both the Business Administration and Computer Science Departments.

Each student who selects this interdisciplinary major has two advisors, a Business Administration faculty member and a Computer Science faculty member.

The major in Computer Information Systems must include:

Select One:

BSAD 1700 Introduction to Business Data Processing **or**
CSC 1100 Computer Application Programming I

Required Courses

CSC 1500 Computer Science I
CSC 1550 Computer Science II
CSC 2500 Assembly Language Programming
CSC 2560 Systems Programming
CSC 2700 COBOL-I
CSC 3200 Programming Languages
CSC 3450 Local Area Networks
BSAD 2100 Principles of Accounting I
BSAD 2110 Principles of Accounting II
BSAD 3200 Principles of Management
BSAD 3300 Fundamentals of Marketing
BSAD 3400 Basic Finance
BSAD 3500 Business Law I
MATH 1800 Business Statistics
MATH 2200 Calculus for Business
BSAD 3710 Systems Analysis Methods
BSAD 4700 Structured Systems Analysis and Design

Select One:

BSAD 4720 DataBase Management Systems **or**
CSC 4500 DataBase Design

Select One:

ECON 1000 Principles of Economics: Macro **or**
ECON 1200 Principles of Economics: Micro **or**
ECON 1250 Introduction to the U.S. Economy

Computer Science

Chairperson
Robert McGuire

Professors	***Associate Professors***	***Assistant Professor***
Aparna Mahadev	*Gerald Johnson*	*Frank Archambeault*
Robert McGuire	*Frits Lander*	
Robert Shaughnessy		

Objectives for the Program in Computer Science

The Computer Science Program provides the opportunity for students to develop a unique blend of knowledge and skills in the areas of computer software, computer hardware, and mathematics. The program is oriented to software and hardware engineering and prepares students for positions within organizations that design and construct hardware and/or software systems.

Requirements for the Major in Computer Science

The Degree of Bachelor of Science in Computer Science must include:

CSC	*1500*	*Computer Science I*
CSC	*1550*	*Computer Science II*
CSC	*1600*	*Introduction to Electronics*
CSC	*1650*	*Digital Electronics*
CSC	*2500*	*Assembly Language Programming*
CSC	*2560*	*Systems Programming*
CSC	*2600*	*Computer Organization*
CSC	*3100*	*Operating Systems*
CSC	*3600*	*Microprocessors*
CSC	*3700*	*Algorithms and Data Structures*
MATH	*2300*	*Calculus I*
MATH	*2400*	*Calculus II*
MATH	*2600*	*Linear Algebra*
MATH	*3100*	*Discrete Algebraic Structures*
PHYS	*1300*	*General Physics II*
PHYS	*1400*	*General Physics II*
		15 semester hours Computer Science Electives.
		Math elective above MATH 2400

Requirements for the Minor in Computer Science

A minor in Computer Science consists of the following courses:

CSC	*1500*	*Computer Science I*
CSC	*1550*	*Computer Science II*
CSC	*2560*	*Systems Programming*
CSC	*3200*	*Programming Languages*
		2 Computer Science electives at or above the 2000 level

Criminal Justice

Chairpersons
John Haacock
Pasquale Micciche

Objectives for the Program in Criminal Justice

The Criminal Justice Program provides students with courses which can lead to a minor or interdisciplinary major combining Human Services, Sociology, and Political Science. The courses provide a foundation for employment in the Criminal Justice field and graduate work.

Requirements for the Interdisciplinary Track in Criminal Justice

As part of their Liberal Arts and Sciences requirements, all students in the Criminal Justice Track must complete:

PSY	*2200*	*Human Growth and Development*
PSY	*2350*	*Abnormal Psychology*

In addition, as part of their core requirements, they must complete:

HMSV	*1100*	*Theory, Issues and Practice in Human Services*

Students interested in concentrating their studies and/or conducting their internship in direct service work must meet the policies of the Behavioral Sciences Department, receive approval from the Criminal Justice Review Committee, and successfully complete the following Human Services courses in addition to the core requirements:

HMSV	*2500*	*Interviewing Techaiques*
HMSV	*2900*	*Social Group Work** **and/or**
HMSV	*3800*	*Case Methods and Reporting and Analysis Human Services**

** Specific course requiremeat will be determined in consultatioa with studeat's advisor, depending on the nature of the iaternship placement.*

Core Requirements (18 semester hours)

CJ/HMSV2000	*Iatroduction to Criminal Justice*
CJ/HMSV2050	*Principles and Practice of Law Eaforcement*
CJ/HMSV2650	*Correctional Theory and Practice*
CJ/POLS 2270	*Introduction to Legal Process*
CJ/SOC 2750	*Crimiaology*
CJ/SOC 4000	*Seminar in Criminal Justice*

Elective Courses (18 semester hours)

Each student will select at least 18 semester hours of electives from the following courses in consultation with their advisor, with at least one course each from Sociology, Human Services, and Psychology coursework.

CJ/HMSV2600	*Juvenile Justice*
CJ/HMSV3300	*Coaamaaity-Based Corrections*
CJ/POLS 3600	*Civil Rights aad Civil Libertiea in the U.S.*
CJ/PSY 2370	*Interpersoaal Effectiveaess*
CJ/PSY 2500	*Social Psychology*
CJ/PSY 2400	*Psychology of Captivity*
CJ/SOC 2700	*Social Problems*
CJ/SOC 2760	*Juveaile Delinqueacy*
CJ/SOC 3500	*Law and Society*
*CJ/*SOC 4970*	*Iaternship*

** Students have the option of selecting an internship of 6 or 12 credits over one or two semesters. All internships shall be conducted in accordance with existing policies in the Department of Behavioral Sciences. A 6-credit (15 hours) internship will count as Criminal Justice elective coursework. A 12-credit (30 hours) internship will count equally as coursework in Criminal Justice electives (6 credits) and in general electives (6 credits).*

Course descriptions can be found listed within the following disciplines: Human Services, Political Science, Psychology, and Sociology. Please refer to the course description section for more information.

Requirements for the Minor in Criminal Justice

An interdisciplinary minor in Criminal Justice is offered by the Departments of Behavioral Sciences and Social Sciences. This 18-credit minor combines courses from Human Services, Psychology, Political Science, and Sociology.

Required Courses (9 semester hours)

HMSV	*2000*	*Introduction to Criminal Justice*
SOC	*2750*	*Criminology*
POLS	*2270*	*Introduction to the Legal Process* **or**
SOC	*3500*	*Law and Society*

Note: If both POLS 2270 and SOC 3500 are taken, one counts as "Required" and the other as "Elective."

Electives (9 semester hours)

HMSV	*3300*	*Probation*
HMSV	*2600*	*Juvenile Justice*
HMSV	*3500*	*The Abuse and Neglect of Children*
POLS	*2270*	*Introduction to the Legal Process*
POLS	*3600*	*Civil Rights and Civil Liberties*
PSY	*2400*	*Psychology of Captivity*
SOC	*3500*	*Law and Society*
SOC	*2760*	*Juvenile Delinquency*
SOC	*2500*	*Race and Ethnic Relations*
SOC	*2500*	*Drugs and Alcohol*
SOC	*2440*	*Urban Sociology*
SOC	*3000*	*Social Stratifications*

** Students who have declared majors in Human Services, Psychology, or Sociology may use no more than two of their major courses toward the minor.*

Early Childhood, Elementary, Middle School, and Secondary Education

Chairperson
Ronald Colbert

Professors	***Associate Professors***	***Assistant Professor***
Patricia Barbaresi	*Robert Greene*	*Diana Suskind*
Ronald Colbert	*Daniel Nomishan*	
Rona Flippo		
Charles Hetzel		
George Miller		
William Strader		

Objectives for the Programs in Early Childhood, Elementary, Middle School, and Secondary Education

The Early Childhood, Elementary, Middle School, Secondary, and Bilingual Education Programs integrate a grounding in the Liberal Arts and Sciences with a comprehensive foundation in pedagogy that results in preparation of highly competent teachers. The departments strength rests in its underlying philosophy that supports the development of educators who are reflective, person-centered practitioners able to effectively construct, articulate, and apply educational theory and research so as to be responsive to current and future educational needs of the individuals and families they serve.

The department prepares its graduates to be Teachers of Early Childhood (grades n-3), Teachers of Elementary (grades 1-6), Teacher of Middle School (grades 5-9), and Teacher of Bilingual Elementary (Spanish.)

Description of the Program

All teacher education majors graduate with a dual major in Education and Liberal Arts and Sciences. The Liberal Arts and Science major is required of all future teachers by the state of Massachusetts.

Teacher education majors (Early Childhood, Elementary, Middle School, Bilingual and Secondary) place emphasis on college coursework that honors cultural, racial, linguistic and social diversity. No less than 36 semester hours of coursework is integrated with a variety of field based experiences in schools. Student field based experiences begin early in the majors and are enhanced by strong departmental collaboration with exemplary schools and practitioners in the region. Many students enjoy opportunities to foster attitudes and skills for creative, collegial teaching in the diverse and changing environment of our McKay Campus School.

The Early Childhood Club, Education Club and Kappa Delta Pi Honor Society offer students the opportunity to grow professionally while meeting with students of similar interests.

Requirements for the Major in Early Childhood, Elementary, Middle School, and Bilingual Education Majors

Majors in Early Childhood, Elementary, Middle School, and Bilingual Education also require a major in the Liberal Arts or Sciences. The requirements for the Secondary Education programs are listed in a separate section, as well as under the Liberal Arts and Sciences majors.

Students must have a 2.5 average to transfer into any of these programs. For student teaching, a 2.5 in the major as well as a positive vote of the education faculty is required.

Early Childhood Education (N-3)

Required Courses

EDUC	*1100*	*Early Childhood Foundations*
EDUC	*2100*	*Reading in Early Childhood Education*
EDUC	*2110*	*Behavioral Science in Early Childhood I*
EDUC	*2200*	*Language Arts in Early Childhood Education*
EDUC	*3100*	*Science, Math, and Social Studies in Early Childhood Education*
EDUC	*4020*	*Fine Arts in Early Childhood Education*
EDUC	*4050*	*Senior Seminar in Early Childhood Education*
EDUC	*4862*	*Practicum in Early Childhood Education I*
EDUC	*4863*	*Practicum in Early Childhood Education II*

External Requirements

Liberal Arts and Sciences Distribution which includes:

PSY	*1100*	*General Psychology*
		Constitutional Exam or Proficiency
		Liberal Arts and Sciences or General Studies Major

Elementary Education (1-6)

Required Courses

EDUC	*2750*	*Science in Education*
EDUC	*3000*	*Principles and Practices in Education*
EDUC	*3030*	*Reading in Education*
EDUC	*3020*	*Teaching Mathematics*
EDUC	*3500*	*Creative Arts in Elementary Education*
EDUC	*3600*	*Social Studies in Education*
EDUC	*3640*	*Reading in the Content Areas*
EDUC	*4010*	*Foundations Seminar*
EDUC	*4100*	*Language Arts in Education*
EDUC	*4882*	*Practicum in Elementary I*
EDUC	*4883*	*Practicum in Elementary II*

External Requirements

Liberal Arts and Sciences Distribution which includes:

MATH	*1400*	*Mathematics Across the Curriculum*
PSY	*1100*	*General Psychology*
PSY	*2210*	*Child Psychology*
		Constitutional Exam or Proficiency
		Liberal Arts or Sciences or General Studies Major

Middle School Education (5-9)

Required Courses

EDUC	*2750*	*Science in Education*
EDUC	*3000*	*Principles and Practices in Education*
MATH	*3020*	*Teaching Mathematics*
EDUC	*3200*	*The Middle School Concept*
EDUC	*3300*	*Curriculum and Instruction in Middle School*
EDUC	*3600*	*Social Studies in Education*
EDUC	*3640*	*Reading in the Content Areas*
EDUC	*4010*	*Seminar: Foundations in Education*
EDUC	*4100*	*Language Arts in Education*
EDUC	*4885*	*Practicum in Middle School I*
EDUC	*4886*	*Practicum in Middle School II*

External Requirements

Liberal Arts and Sciences Distribution which includes:

MATH	*1400*	*Mathematics Across the Curriculum*
PSY	*1100*	*General Psychology*
PSY	*2210*	*Adolescent Psychology*
		Constitutional Exam or Proficiency
		Liberal Arts and Sciences or General Studies Major

Bilingual Elementary Education (Spanish)

All Elementary Education Core Courses and Bilingual Professional Sequence

EDUC	*5100*	*Introduction to Bilingual Education*
EDUC	*5200*	*Theory of Language and Second Language Acquisition*
EDUC	*5300*	*Bilingual Teaching Methods*
EDUC	*5400*	*Assessment and Evaluation of Bilingual Programs*
EDUC	*5500*	*Bilingual Practicum*
EDUC	*5600*	*Bilingual Seminar*

External Requirements

Liberal Arts and Sciences Distribution which includes:

SOC	*1100*	*Introduction to Sociology*
SOC	*1250*	*Introduction to Cultural Anthropology or*
SOC	*2500*	*Race and Ethnic Relations*
HIST	*2700*	*History of Mexico or*
HIST	*2750*	*History of South America*
HIST	*3950*	*Cont. Latin America or*
IDIS	*1100*	*Women in Latin America*
SPAN	*3000*	*Hispanic Culture*
SPAN	*4100*	*Practical Spanish Public Svc. II or beyond*
SPAN	*3500*	*Spanish Conversation and Composition*

Economics

Chairperson
Pasquale Micciche

Professors	***Associate Professors***
Caroline Murphy	*Pirudas Lwamugira*
Nancy Wiegersma	*Michael Turk*

Objectives for the Program in Economics

The Economics Program offers Liberal Arts and Sciences courses which focus on understanding the United States economy and its relationship to other economic systems. The program offers both a major and a minor to students who are interested in a career in Economics or Business.

Requirements for the Major in Economics

The degree of Bachelor of Science in Economics requires 36 credits:

ECON	*1000*	*Principles of Macroeconomics*
ECON	*1200*	*Principles of Microeconomics*
ECON	*3650*	*Intermediate Macroeconomics*
ECON	*3660*	*Intermediate Microeconomics*
ECON	*2400*	*Money and Banking*
ECON	*3000*	*History of Economic Thought*
MATH	*2200*	*Calculus for Business*
MATH	*1800*	*Business Statistics*

Four courses selected from the following:

ECON	*1300*	*Consumer Economics*
ECON	*2200*	*Comparative Economic Systems*
ECON	*2400*	*Money and Banking*
ECON	*2450*	*Human Resource Economics*
ECON	*2500*	*Economic Development*
ECON	*2550*	*Urban Economics*
ECON	*2600*	*Public Finance*
ECON	*3000*	*History of Economic Thought*
ECON	*3550*	*International Economics*
ECON	*3650*	*Intermediate Macroeconomics*
ECON	*3660*	*Intermediate Microeconomics*
ECON	*3700*	*Econometrics*
ECON	*3750*	*Managerial Economics*
ECON	*4900*	*Independent Study in Economics*
ECON	*4940*	*Internship in Economics*
ECON	*5000*	*Topics in Economics*
GEOG	*3000*	*Economic Geography*
BSAD	*4230*	*Business Fluctuations and Forecasting*

Requirements for the Minor in Economics

A minor in Economics requires:

ECON	*1000*	*Principles of Macroeconomics*
ECON	*1200*	*Microeconomics*
		Four courses selected from courses listed for the Economics major.

PROFILE

Irene Martyniuk
Assistant Professor of English

Irene, a newcomer to the faculty at Fitchburg State, started teaching writing in the English Department in the fall of 1996. Her course in Business and Technical Writing has been a big hit with students who have put their newly learned skills to immediate and profitable use. Having received her Master's and PhD at large universities, she welcomed the small college atmosphere at Fitchburg. Through teaching and serving as the faculty advisor to the Point, the school newspaper, Irene has quickly become familiar to many students and faculty on the friendly campus.

English

Chairperson
Nancy Yee

Professors	***Associate Professors***	***Assistant Professors***
Janice Alberghene	*Roberta Adams*	*George Case*
Judith Budz	*Colin Bourn*	*Irene Martyniuk*
Arnold Gordenstein	*Chola Chisunka*	*Donelle Ruwe*
Irene Harris	*Nancy Kelly*	
William Keough	*Richard McElvain*	
Marilyn McCaffrey	*Kelly Morgan*	
Thomas Murray	*Robert Tapply*	
Robert Welch		
Nancy Yee		

Objectives for the Program in English

The English Program serves all students through its offerings in freshman writing, speech, and literature courses required in the Liberal Arts and Sciences Program. Through a variety of specialized programs, English majors can obtain a BA English-Literature, BA English-Professional Writing, BA English-Theater, and BS English-Literature, and Certification of Teachers of English. The department also offers two minors, the minor in English and in Theater.

Requirements for the Major in English

Approaches to English Studies (ENGL 1999) provides an introduction to the discipline. All English majors and minors must satisfactorily complete the course by the end of their sophomore year. Transfer students must take ENGL 1999 during their first year at the college, unless exempted by the Department Chair, based on evaluation of transfer course work.

Internship

The English Department, through its internship program, offers an opportunity for seniors and second-semester juniors to explore a profession for one full semester of work and credit. The internship enables students to apply theoretical knowledge and laboratory-developed skills in an actual professional setting. Students in the program have enjoyed an unusually high level of job-entry success.

English majors can experience a wide range of professional activity in fields such as radio, television, journalism, personnel work, library functions (school, public, or technical), public relations, law, government, human services, and technical productions. New internship positions are identified each semester. Department approval is required.

Specializations for the Major in English

The Bachelor of Arts in English—Literature

This program requires 36 hours in English.

- A course in speech or performance fulfills the speaking and listening requirements
- Second-year language proficiency is also required
- Students keep a portfolio of five representative English papers for Senior review
- This program also provides preparation for Provisional Certification for Teaching Secondary School English

Required Courses

ENGL 1999 Approaches to English Studies
ENGL 2000 American Literature I
ENGL 2100 American Literature II **or**
One post-Civil War American literature course

One equivalent period course in English literature may be substituted for one survey among the following requirements:

Required
ENGL 2200 English Literature I
Or choose one of the following:
ENGL 3030 The Middle Ages
ENGL 4010 Chaucer and His World

Required
ENGL 2210 English Literature II
Or choose one of the following:
ENGL 4040 Major English Writers of the 17th Century
ENGL 4050 The Novel in the 18th Century
ENGL 4060 The Age of Satire: 1700-1750
ENGL 4070 From Classic to Romantic: 1750-1800

Required
ENGL 2220 English Literature III
Or choose one of the following:
ENGL 4080 Romanticism
ENGL 4090 The 19th-Century English Novel
ENGL 4095 The Age of Dickens
ENGL 4100 Victorian Literature

Required
ENGL 4020 Shakespeare's Drama **or**
ENGL 4030 Shakespeare's Thought
ENGL 4400 Seminar (for juniors or seniors)

Electives

One elective in World or Multicultural literature and three electives in literature; at least one 4000-level literature course in addition to Shakespeare; and one 3000-level literature course.

Bachelor of Science Degree in English-Literature

This program is available for students who choose not to fulfill the requirement for foreign language proficiency at the second-year level. All other requirements are the same as for the Bachelor of Arts in English-Literature.

Bachelor of Arts in English-Professional Writing

This program requires 36 hours in English.

- A course in speech is required
- Students also keep a portfolio of ten representative course papers for Senior review

Required Courses

ENGL 1999 Approaches to English Studies
ENGL 2000 American Literature I
ENGL 2100 American Literature II **or**
One post-Civil War American literature course

Equivalent period courses in English Literature may be substituted for two surveys among the following requirements:

Required
ENGL 2200 English Literature I
Or choose one of the following:
ENGL 3030 The Middle Ages
ENGL 4010 Chaucer and His World
ENGL 4020 Shakespeare's Drama
ENGL 4030 Shakespeare's Thought

Required

ENGL 2210 English Literature II

Or choose one of the following:

ENGL 4040 Major English Writers of the 17th Century
ENGL 4050 The Novel in the 18th Century
ENGL 4060 The Age of Satire: 1700-1750
ENGL 4070 From Classic to Romantic: 1750-1800

Required

ENGL 2220 English Literature III

Or choose one of the following:

ENGL 4080 Romanticism
ENGL 4090 The 19th-Century English Novel
ENGL 4095 The Age of Dickens
ENGL 4100 Victorian Literature

Electives

*One elective in **World** or **Multicultural** literature; at least one 4000-level literature course and one 3000-level literature course*
ENGL 2800 Journalism
ENGL 3890 Advanced Expository Writing

Nine hours from the following courses:

ENGL 3810 Journalism Practicum I
ENGL 3800 Creative Writing
ENGL 2810 Editing and Publishing
ENGL 3860 Writing for Business and Technology
ENGL 3870 Feature and Magazine Writing
ENGL 4260 Journalist to Novelist
**ENGL 4940 Internship*
**ENGL 4950 Internship*
**ENGL 4960 Internship*

** One of these Internships is recommended and requires Department approval.*

Bachelor of Arts in English—Theater

This program requires 36 hours in English. Second year language proficiency is also required.

Required Courses

ENGL 1999 Approaches to English Studies
ENGL 2000 American Literature I
*ENGL 2100 American Literature II **or***
One post-Civil War American literature course

Equivalent period courses in English Literature may be substituted for two surveys among the following requirements:

Required

ENGL 2200 English Literature I

Or choose one of the following:

ENGL 3030 The Middle Ages
ENGL 4010 Chaucer and His World
ENGL 4020 Shakespeare's Drama
ENGL 4030 Shakespeare's Thought

Required

ENGL 2210 English Literature II

Or choose one of the following:

ENGL 4040 Major English Writers of the 17th Century
ENGL 4050 The Novel in the 18th Century
ENGL 4060 The Age of Satire: 1700-1750
ENGL 4070 From Classic to Romantic: 1750-1800

Required

ENGL 2220 English Literature III

Or choose one of the following:

ENGL 4080 Romanticism
ENGL 4090 The 19th-Century English Novel
ENGL 4095 The Age of Dickens
ENGL 4100 Victorian Literature

Required

*ENGL 4020 Shakespeare's Drama **or***
ENGL 4030 Shakespeare's Thought
*ENGL 3000 World Drama **or***
ENGL 3020 Modern Drama
THEA 2000 Introduction to Theater
THEA 2700 Acting
THEA 3000 Stagecraft and Theater Production
THEA 4000 Directing the Play
**THEA 4940 Internship*
**THEA 4950 Internship*
**THEA 4960 Internship*

***One of these Internships is recommended and requires Department approval.*

Electives

Students are encouraged to explore such related courses as:

ENGL 4130 20th-Century Irish Drama and Poetry
THEA 2100 Children's Theater
THEA 2500 Mime and Movement
PHED 4050 Art of Dance
PHED 4130 Making Dances: Choreography and Composition
SPCH 2400 Voice and Articulation

Bachelor of Science in English—Theater

This program is available for students who choose not to fulfill the requirement for foreign language proficiency at the second-year level. All other requirements are the same as for the Bachelor of Arts in English-Theater.

Provisional Certification for Teaching English

Students interested in teaching English on the secondary level need to complete the provisional certification program. The requirements are Bachelor of Arts in English/Literature or Bachelor of Science plus:

Major: English

Required

ENGL 2910 Literature for Young Adults
ENGL 4600 The Structure and Nature of Language
Elective in World or Multicultural Literature

Core Courses

PSY 2230 Adolescent Psychology
ENGL 2860 Introduction to Secondary School Teaching
ENGL 4700 Teaching Writing in Secondary Schools
ENGL 4850 Special Methods in English
ENGL 4860 English Practicum in a Secondary School (300 hours)

Double Majors

Students with double majors in English and Early Childhood, Elementary, Middle School, or Special Education are working toward a BS degree and are exempt from foreign language proficiency requirement.

Requirements for the Minor in English

The Minor in English has two tracks, each requiring 18 hours in English courses.

Track A: Concentration in Literature

ENGL 1999 Approaches to English Studies

Six hours of survey from:

ENGL 2000 American Literature I
ENGL 2100 American Literature II
ENGL 2200 English Literature I
ENGL 2210 English Literature II
ENGL 2220 English Literature III
ENGL 2400 World Literature I
ENGL 2500 World Literature II

Note: Nine hours in literature electives—six must be at the 3000 level or above

Track B: Concentration in Professional Writing

ENGL 1999 Approaches to English Studies
ENGL 3890 Advanced Expository Writing

Six hours of survey from:

ENGL 2000 American Literature I
ENGL 2100 American Literature II
ENGL 2200 English Literature I
ENGL 2210 English Literature II
ENGL 2220 English Literature III
ENGL 2400 World Literature I
ENGL 2500 World Literature II

Six semester hours in advanced writing courses selected from:

ENGL 2800 Journalism
ENGL 3810 Journalism Practicum I
ENGL 3820 Journalism Practicum II
ENGL 3800 Creative Writing
ENGL 3860 Writing for Business and Technology
ENGL 3870 Feature and Magazine Writing
ENGL 2810 Editing and Publishing
ENGL 4260 Journalist to Novelist

Note: Credit is not given for both: ENGL 2000 and COMM 2000; ENGL 3870 and COMM 3870; ENGL 3860 and COMM 3860.

French

Chairperson
Jane Fiske

Professor
Jeanne Moore

Objectives for the Program in French

The French Program offers students the opportunity to begin the study of the French language and culture or to continue study at an intermediate or advanced level.

Requirements for the Minor in French

The minor in French requires a minimum of 15 semester hours including the following:

Required Courses

FREN 2000 Intermediate French I
FREN 2100 Intermediate French II

Electives

Choose at least three of the following:

FREN 3000 French Civilization
FREN 3300 French Literature I
FREN 3400 French Literature II
FREN 3500 French Conversation and Composition
FREN 4903 Independent Study

General Studies

Coordinator
Lee Cunningham

Objectives for the Program in General Studies

The Bachelor of Science and Bachelor of Arts in General Studies degrees provide for individually designed, interdisciplinary majors, which allow students to work with faculty advisors to develop a course of study that responds to individual educational and professional goals. Additional objectives are:

- To enable students to explore multidisciplinary areas and to integrate them in a coherent and meaningful way
- To provide the opportunity for broadly-based Liberal Arts and Sciences majors
- To provide the opportunity for majors that combine Liberal Arts and Sciences courses with professional courses
- To provide the opportunity, for a part-time, individually paced education, which allows students to build their academic confidence and integrate their studies more easily into their lives

Description of the Major in General Studies

There are many possible combinations of course work available through this major, limited only by the breadth of courses offered through the day and evening divisions of the college. When creating a plan of study, a student must have a rationale for a thematic approach to their program.

Criteria for Admissions

There is a formal application procedure for students who choose to major in General Studies. The purpose of the application is to:

- Set forth the student's academic and professional goals and demonstrate why they are best achieved through the General Studies Program
- Require students to outline their proposed program
- Stipulate any required independent exercise or internship
- Provide college-level courses and grades

Deadlines: The form, together with a preliminary plan of study, should be received by the General Studies Coordinator no later than October 15th for entrance into the program in the following spring semester and February 15th for entrance in the following summer or fall semester.

The General Studies Coordinator along with the General Studies Committee reviews the application with the student and, if approved, they finalize the plan of study. The student's advisor is chosen and is responsible for filing a copy of the student's program with the college Registrar. Any subsequent changes in the student's program must be approved by the student's General Studies Committee.

Requirements for the Major in General Studies

The General Studies degree is normally awarded as a Bachelor of Science. A Bachelor of Arts is awarded if the student includes foreign language study through the second year of college-level work and concentrates his/her field of studies in the Liberal Arts and Sciences fields. Other requirements include:

- A rationale and a thematic organizing principle for each program
- A minimum of 36 semester hours of coursework within the major
- A minimum of 9 semester hours in each of three fields of study (defined by disciplines, not department or tracks)
- A minimum of 6 semester hours of intermediate or advanced level course work in each of the three fields of study
- A maximum of 9 semester hours of Liberal Arts and Sciences course work, which can be counted toward the major (One course per Liberal Arts and Sciences cluster, if applicable)
- A senior-year "Capstone" course intended to help students to integrate the various fields of study. This may take the form of an independent study or an internship (3–15 semester hours)
- A minimum 30 semester hours of course work completed after the program of study is approved and filed with the registrar

A student's program must meet the approval of their General Studies advisor and advisors from each of the chosen fields of study.

General Studies (Humanities)*

Chairperson
Jane Fiske

Objectives for the Major

The Humanities Department offers a General Studies major, which applies especially to students pursuing a degree in Elementary, Early Childhood, or Middle School Education. The major covers the new requirements for certification that specify a double major.

Criteria for Admissions

Students interested in such a major should contact one of the designated faculty of the Humanities Department who assists the student in the choice and the design of the major from the disciplines listed below.* The Humanities Department maintains the advising records, issues a progress report, and informs the registrar.

The advisor to students in the Elementary, Early Childhood, and Middle School Education Department meets with the student for advising purposes after the student has consulted with the Humanities Department.

Requirements for the BS in General Studies

The following courses are recommended for the Humanities Program—Elementary, Early Childhood, and Middle School Education Majors.

Track I

Levels I and II

Choose 9 semester hours from each of three disciplines. One should not have more than 9 semester hours of courses with an asterisk (*). Total of 27 semester hours minimum

A. Art

**ART*	*1150*	*Survey of Art Forms I*
**ART*	*1160*	*Survey of Art Forms II* **or**
**ART*	*1400*	*Drnwing*
ART	*1500*	*Life Drawing*
ART	*1600*	*Design*
ART	*2300*	*Americnn Art*
ART	*1720*	*Contemporary Art*
ART	*2250*	*Art of the Renaissance Painting* **or**
		nny other upper-level art courses

B. Music

**MUSC*	*1000*	*Art of Music*
MUSC	*2000*	*Commonwealth of the Arts*
**MUSC*	*2200*	*Basic Music Theory*
MUSC	*3100*	*Symphony*
MUSC	*3200*	*Opera*
MUSC	*3400*	*20th-Century Music*
MUSC	*3500*	*American Music*
MUSC	*4500*	*Hnrmony* **or**
		nny other upper-level music courses

** Humanities Track*

C. History

**HIST*	*1000*	*World Civilizations I*
**HIST*	*1100*	*World Civilizations II*
**HIST*	*1150*	*World Civiliznions III*
HIST	*1400*	*U.S. History I*
HIST	*1500*	*U.S. History II*
HIST	*2000*	*Medieval Europe*
HIST	*2100*	*20th-Century Europe*
HIST	*2200*	*British History*
HIST	*2300*	*Blnck Americn*
HIST	*2490*	*Women in U.S. History to 1870* **or**
		any other upper-level history courses

D. Philosophy

**PHIL*	*1000*	*Introduction to Western Philosophy*
PHIL	*1100*	*Logic*
PHIL	*2000*	*Philosophy of Educntion*
PHIL	*2440*	*American Philosophy*
PHIL	*2600*	*Philosophy of Man*
PHIL	*3310*	*Ancient nnd Medieval Philosophy*
PHIL	*4100*	*Philosophy of Art* **or**
		nny other upper level philosophy courses

Level III

A capstone course, project, or internship for 3-15 semester hours.

Track II

A second option in the General Studies (Humanities) major combines courses in Language, Literature, and History. This option can be taken in French, Spanish, German, or Russian. A minimum of 36 semester hours course work is needed to complete this option.

E1. French

FREN	*2000*	*Intermediate French I*
FREN	*2100*	*Intermediate French II*
FREN	*2600*	*French Civilization*
FREN	*2700*	*French Literature*
FREN	*3500*	*French Conversntion and Composition*
FREN	*5000*	*Topics in French*

E2. German

GER	*2000*	*Intermediate German I*
GER	*2100*	*Intermediate German II*
GER	*2600*	*German Civilization*
GER	*2800*	*Modern German Literature*
GER	*3500*	*German Conversation and Compositton*
GER	*5000*	*Topics in German*

E3. Russian

RUSS	*2000*	*Intermediate Russian I*
RUSS	*2100*	*Intermediate Russian II*
RUSS	*2400*	*Dostoevsky nnd Tolstoy*
RUSS	*2500*	*Russian Literature*
RUSS	*2600*	*Russian Culture and Soviet Life*
RUSS	*5000*	*Topics in Russian*

E4. Spanish

SPAN	*2000*	*Intermediate Spanish I*
SPAN	*2100*	*Intermediate Spanish II*
SPAN	*2600*	*Hispanic Culture*
SPAN	*2700*	*Hispanic Literature*
SPAN	*3500*	*Spanish Conversation and Compositton*
SPAN	*5000*	*Topics in Spanish*

The above language programs also require courses in literature.

Literature Requirements

Select 9 semester hours from the following courses:

ENGL	*2000*	*American Literature I*
ENGL	*2100*	*American Literature II*
ENGL	*2400*	*World Literature I*
ENGL	*2500*	*World Literature II*
ENGL	*3300*	*Women and Literature*

The above language programs also require Electives.

Electives

Select 9 semester hours of elective courses from the following:

PHIL	*1000*	*Introduction to Western Philosophy*
HIST	*1000*	*World Civilization I*
IDIS	*1100*	*Women in Latin America*
HIST	*1100*	*World Civilization II*
HIST	*1150*	*World Civilization III*
HIST	*1400*	*U.S. History I*
HIST	*1500*	*U.S. History II*
HIST	*2000*	*Medieval Europe*
HIST	*2100*	*20th-Century Europe*
HIST	*2700*	*History of Mexico, Central America, and the Caribbean*
HIST	*2750*	*History of South America*
HIST	*3300*	*Modern Russia to 1905*
HIST	*3350*	*Modern Russia to 1905*

A capstone course of 3-15 credits satisfies the Level III requirement.

Track III

In a third option in the General Studies (Humanities) major students choose 9 semester hours from each of three of the following areas: Music, Art, Dance, and Literature/Theater. In addition, students will take 9 semester hours of Core Courses listed below.

Core

MUSC	*2000*	*Commonwealth of the Arts*
EDUC	*3500*	*Creative Arts in Education* **or**
IDIS	*1300*	*Creative Arts*
MUSC		*Seminar in the Humanities*

Music

MUSC	*1000*	*Art of Music*
MUSC	*2200*	*Basic Music Theory* **or** *any other Upper-Level Music History class*
MUSC	*4000*	*Choral Arts** **or**
MUSC	*1000*	*Instrumental Arts* **or**
MUSC	*4200*	*Class Piano*
MUSC	*4300*	*Class Voice*

**Three one-credit music studio courses.*

Art

ART	*1100*	*Art Appreciation*
ART	*1150*	*Survey I* **or**
ART	*1160*	*Survey II* **or** *any other Upper-Level Art History class*
ART	*1400*	*Drawing* **or**
ART	*1450*	*Introductory Painting* **or**
ART	*1600*	*Design* **or**
ART	*1650*	*Three-Dimensional Design* **or**
ART	*1840*	*Introduction to Sculpture* **or**
ART	*2200*	*Life Drawing* **or** *any other Upper-Level Studio Art class*

Dance

PHED	*4050*	*Art of Dance*
PHED	*4130*	*Making Dance*
THEA	*2500*	*Mime and Movement* **or**
PHED	*1210*	*Modern Jazz I* **or**
PHED	*1220*	*Modern Jazz II* **or**
PHED	*1230*	*Modern Jazz III* **or**
PHED	*1310*	*Afro Jazz Dance*

**Three one-credit dance studio courses.*

Literature/Theater

THEA	*2000*	*Introduction to Theater*
THEA	*2700*	*Acting*
ENG	*3000*	*World Drama* **or**
ENG	*3020*	*Modern Drama* **or** *any other Upper-Level Dramatic Literature class.*

Geo/Physical Sciences

Chairperson
Robert J. Gardula

Professors	***Associate Professor***	***Assistant Professors***
James P. Barbato	*Ali Errishi*	*Lawrence R. Guth*
Robert F. Champlin		*Jiang Yu*
Robert J. Gardula		
Esmail Valanejad		

Objectives for the Program in Geo/Physical Sciences

The Geo/Physical Sciences Program offers courses to all students who seek to satisfy requirements in the Liberal Arts and Sciences Program. The department also offers a major or minor to students interested in a career in the Geophysical Sciences.

Requirements for the Major in Geography/Earth Science

The degrees of Bachelor of Science and Bachelor of Arts in Geography or Earth Science each require a minimum of 36 semester hours of coursework.

Core Requirements

GEOG	*1000*	*Introduction to Geography*
GEOG	*2100*	*Geology*
GEOG	*2800*	*Map Use and Interpretation*

Geography Majors

Additional Requirements

GEOG	*2400*	*Computer Applications in Geography/Earth Science*
GEOG	*3400*	*Population Geography*
GEOG	*3500*	*Geographic Information Systems*
GEOG	*4800*	*Cartography I*

A course in regional geography as well as additional courses are chosen in consultation with the academic advisor.

Earth Science Majors

Additional Requirements

GEOG	*2200*	*Meteorology*
GEOG	*3250*	*Historical Geology*
GEOG	*4200*	*Geomorphology*
GEOG	*4220*	*Structural Geology*
GEOG	*4300*	*Oceanography*
GEOG	*4500*	*Remote Sensing of the Environment*
GEOG	*4600*	*Environmental Hydrogeology*
PHYS	*1030*	*Astronomy*
BIOL	*2300*	*Ecology*
		A geography elective chosen in consultation with the advisor.

Required cognate courses for Earth Science majors
(to be taken as part of Liberal Arts and Sciences distribution and free electives):

- 8 semester hours Chemistry
- 4 semester hours Physics
- 6 semester hours Mathematics
- 3 semester hours Computer Science

**Those students interested in graduate school should give strong consideration to summer field camp.*

Requirements for Provisional Certification for Teaching

Students interested in teaching Earth Science on the middle school/secondary-level must complete the provisional certification track. The requirements are as follows:

Major: Earth Science

Core Courses

PSY	*2230*	*Adolescent Psychology*
GEOG	*2860*	*Introduction to Secondary School Teaching*
ENGL	*4700*	*Teaching Writing in Secondary Schools*
GEOG	*4850*	*Special Methods in Earth Science*
GEOG	*4880*	*Earth Science Practicum in a Secondary School (300 hrs.)*

Requirements for the Minor in Geography/Earth Science

The Minor in Geography consists of GEOG 1000, Introduction to Geography, and five additional geography courses chosen in consultation with one of the geography/earth science faculty.

German

Chairperson
Jane Fiske

Professors
Jeanne Moore

Objectives for the Program in German

The German program offers students the opportunity to begin the study of German language and culture. Intermediate and advanced work is available through independent study.

Requirements for the Minor in German

The minor in German requires a minimum of 15 semester hours, including the following:

Required Courses

GER	*2000*	*Intermediate German I*
GER	*2100*	*Intermediate German II*

Electives

Choose at least three of the following:

GER	*3000*	*German Civilization*
GER	*3300*	*German Literature I*
GER	*3500*	*German Conversation and Composition*
GER	*4903*	*Independent Study*

Graphics

Chairpersons
Stanley Bucholc
Robert McGuire
Wayne Munson

Objectives for the Program in Graphics

The program in Graphics provides an interdisciplinary degree with applications in Computer Science, Communications/Media, and Industrial Technology. Additional information on Graphics can be attained from the description of majors in Computer Science, Communications/Media, and Industrial Technology.

Requirements for the Minor in Graphics

The Interdisciplinary Graphics Minor develops an appreciation for all three areas of study while concentrating in one of the areas. Students gain a theoretical background in Computer Science, a design/applications background in Communications/Media, and a production background in Industrial Technology.

Required Courses

CSC	*1000*	*Introduction to Programming or*
CSC	*1500*	*Introduction to PASCAL*
COMM	*3810*	*Graphic Design I*
ITEC	*1500*	*Graphic Arts Processes* ***or***
COMM	*3910*	*Graphic Arts Production*
CSC/COMM/ITEC		*Interdisciplinary Graphics Seminar*

A concentration (two courses) in one of the following areas:

Concentration in Computer Science

CSC	*1550*	*Data Structures*
CSC	*2000*	*Computer Graphics for Nonmajors*

Concentration in Communications/Media

COMM	*3890*	*Electronic Graphic Design*
COMM	*3820*	*Graphic Design II*

Concentration in Industrial Technology

ITEC	*2410*	*Automated Drafting Systems*
ITEC	*2500*	*Offset Lithography* ***or***
ITEC	*3530*	*Typography I*

Note: Students must select a concentration in a department outside their major field of study.

History

Chairperson
Pasquale Micciche

Professors	***Associate Professors***	***Assistant Professors***
Harriet Alonso	*Ralph Coffman*	*Benjamin Lieberman*
Pasquale Micciche	*John Paul*	*Susan Williams*
Edmund Thomas		*Sibyl Brownlee*

Objectives for the Program in History

The History Program offers a variety of courses to all students providing a strong foundation in World and United States history.
A major and minor in history, as well as provisional certification for teaching history, are provided.

Requirements for the Major in History

The Bachelor of Science and Bachelor of Arts in History requires 36 hours of course work. All BA and BS candidates must have a concentration (15 semester hours) in a subject area outside of history. The concentration is constructed with the approval of the student's departmental advisor. Recognized minors in other disciplines may be substituted for the concentration.

Required Courses

HIST	*1000*	*World Civilizations I*
HIST	*1100*	*World Civilizations II*
HIST	*1150*	*World Civilizations III*
HIST	*1400*	*U.S. History I*
HIST	*1500*	*U.S. History II*
HIST	*4000*	*Writing History*

- One upper-level elective from each of the following areas: European History, U.S. History, Non-Western (Asia, Africa, or Latin America)
- Nine semester hours of History electives
- The Bachelor of Arts also requires foreign language proficiency at the second-year level

Requirements for Provisional Certification for Teaching History

Students interested in teaching History on the secondary level complete the provisional certification track. Admission into the program requires a 2.5 GPA and successful completion of the state-required Communication Exam. To enter the Practicum, students must have a 2.75 in their major.

Major: History

Core Courses

PSY	*2230*	*Adolescent Psychology*
HIST	*2860*	*Introduction to Secondary School Teaching*
SPED	*3800*	*Secondary Program in Adolescent Special Needs*
ENGL	*4700*	*Teaching Writing in Secondary Schools*
HIST	*4850*	*Special Methods in History*
**HIST*	*4860*	*History Practicum in a Secondary School (300 hrs.)*
**HIST*	*4870*	*History Practicum in a Secondary School (300 hrs.)*

**Each student is responsible for their own transportation to and from prepracticum as well as practicum sites.*

Requirements for the Minor in History

The minor in History consists of 18 semester hours with at least three courses at the 2000-level or above.

Leadership Academy Honors Program

Coordinator: Dr. Thomas Murray

Objectives for the Leadership Academy

The Leadership Academy provides an enriched, stimulating set of courses for the best-prepared and most qualified students. Students will be admitted to the program in the freshman year or may apply to transfer into it in the sophomore or junior years. Students who complete the program do so in lieu of the Liberal Arts and Sciences requirements. Students who cannot or do not wish to finish the entire program may complete a Leadership minor; those students will also need to complete the LA&S requirements.

The goal of the Leadership Academy is to educate leaders for the 21st century. In order to accomplish this task, the program has established an integrated set of courses, which incorporate six themes (globalization, communication, computerization, science and technology, ethics and diversity) and are taught over a four-year sequence. Students must have a high level of proficiency in research, writing and computer skills; must be effective team members; and must be able to present their ideas in formal and informal settings. They are expected to apply their learning in both the college and the larger community through a series of extra curricular activities, volunteer positions and service learning, co-curricular activities.

Criteria of Invitation to Leadership Academy

Freshmen students are invited to join the Leadership Academy based on their high school preparation, SAT scores, and documented evidence of leadership potential. Upperclassmen applications will also be considered based on GPAs and evidence of leadership potential.

Curriculum for the Leadership Academy

The Leadership Academy curriculum creates a solid foundation of leadership knowledge and skills in the first year and builds on this base in each of the succeeding years:

First Year Curriculum

LEAD	*1000*	*Our Many Communities Colloquium*
LEAD	*1005*	*Foundations of Leadership I*
LEAD	*1010*	*Foundations of Leadership II*
LEAD	*1025*	*Service Learning*
LEAD	*1050*	*Honors English I*
LEAD	*1140*	*Leadership in the Outdoors*
**LEAD*	*1150*	*Chonging World I (19th century)*
LEAD	*1200*	*Honors English II*
**LEAD*	*1250*	*Changing World II (20th century)*
PHED	*2030*	*Consumer Health*

Second Year Curriculum

**LEAD*	*2000*	*Leadership in the Humanities I*
LEAD	*2001*	*Research in the Humanities I*
**LEAD*	*2050*	*Leadership in the Humanities II*
LEAD	*2051*	*Research in the Humanities II*

Third Year Curriculum

**LEAD*	*3000*	*Physics/Mathematics/Technology*
**LEAD*	*3050*	*Biology/Mathematics/Technology*
LEAD	*3051*	*Biology/Mathematics/Ethics*

Fourth Year Curriculum

Senior Thesis/Project

All students in the Leadership Academy will also demonstrate proficiency in a foreign language at the intermediate level. This requirement can be met through examination or coursework.

*A student may take the Changing World, Leadership in the Humanities, or Physics/Mathematics/Technology-Biology/ Mathematics/Technology in years other than those specified. Colloquia that complement these courses should be taken concurrently.

Leadership Minor

Students who enter the program as sophomores or juniors, or students who choose to leave the program before completion, may elect to complete a Leadership Minor. The minor will consist of the following courses:

Required

LEAD 1005 Foundations of Leadership I	*3 credits*
LEAD 1010 Foundations of Leadership II	*3 credits*

Select **one or two** of the following year-long course sequences:

LEAD 1050 Honors English I **and**	
LEAD 1200 Honors English II	*6 credits*
LEAD 1150 Changing World I **and**	
LEAD 1250 Changing World II	*6 credits*
LEAD 2000 Leaders in the Humanities (19th century) **and**	
LEAD 2050 Leaders in the Humanities (20th century)	*6 credits*
LEAD 3000 Physics/Mathematics/Technology **and**	
LEAD 3050 Biology/Mathematics/Technology	*8 credits*
LEAD 4990 Senior Thesis/Project	*6 credits*

A **minimum** of **two** colloquia taken in conjunction with the year-long course sequences.

Leadership Academy Club

All students in the Leadership Academy are also members of the Leadership Academy Club. The club is active in campus life and sponsors speakers and performers for the campus as well as trips to cultural sites and performances

Human Services

Chairperson
John Hancock

Coordinator
Robert Wellman

Professors
Cynthia Crosson
Mary King
David C. Maloney
Richard J. Spencer

Associate Professors
John M. Hancock

Objectives for the Human Services Program

A major in Human Services leads to a Bachelor of Science degree. Administered by the Department of Behavioral Sciences in cooperation with various other college departments and areas, this interdisciplinary major allows students to develop the broad background and skills necessary for working with people. The student is prepared to work in a variety of settings in the helping professions at entry level positions, and for graduate study.

Description of the Major in Human Services

The Human Services Program is competency based. The college provides the theoretical and conceptual bases and facilitates the development of generic helping skills. Students further develop and demonstrate their knowledge and skills within a community setting.

Among the special characteristics of Fitchburg State's program is the coordination of supervised work experiences with academic studies. This experience involves working in organizations under professional supervision while fulfilling Human Service course work at the college.

The work experiences, which take the form of both course-related practice and an intensive field work assignment, strengthen a student's position for then pursuing a career. Further, it gives the student a realistic basis for choosing a career, and potential employers an opportunity to screen students based on job performance. Students are also encouraged to gain additional experiences through volunteer activities.

The Human Services Program Trains generalists to work with diverse clients in many settings. Course work may be designed for students to pursue interests in:

- Administration
- Aging and Gerontology
- Criminal Justice*
- Family and Children's Services
- Juvenile Justice
- Mental Health

** An interdisciplinary Track in Criminal Justice is available for students wishing to specialize in Law Enforcement, corrections, and related areas. (see pages 82-83 for details)*

Students should meet with their Human Services advisors to learn about the recommended course work and the career possibilities associated with their interests.

PROFILE

Dr. Richard Spencer
Full Professor in Behavioral Sciences

Richard is a 25-year veteran of Fitchburg State, and as such, he is involved in the college at many levels. Not only does he teach both graduate and undergraduate courses in Behavioral Science and Human Services, he is the Chairperson for the Graduate Counseling Program and the Graduate Council, he serves on the Behavioral Sciences Curriculum Committee and the Academic Policy Committee, and he acts as an advisor to the University Christian Fellowship. If that isn't enough, this highly accomplished professor has been published in a variety of places, including journals, accreditation reports, and policy manuals.

Policies for the Major

Admission and Retention Policy

A student may enter the Human Services Major by either declaring it as a major upon admission to the college or as an internal transfer (transferring into the Human Services major from another major within this college). All students are subject to retention reviews by the Human Services Review Committee. Retention is based upon both academic performance and suitability for the field. (See Index for Academic Standards Policy.)

Policy Concerning the Human Services Major and Advisor Meetings

Failure to attend departmental meetings called for Behavioral Science majors and/or failure to contact advisors may be grounds for a student's name to be dropped from the roster of those listed in the major.

Requirements for the Major in Human Services

Program Structure

There are four components to the major:

A. The Human Services Core

These courses are required for all majors:

HMSV	*1100*	*Theory, Issues, and Practice in Human Services*
HMSV	*2500*	*Interviewing Techniques*
HMSV	*2900*	*Social Group Work*
HMSV	*3800*	*Methods of Case Recording and Analysis*
HMSV	*4870*	*Field Work in Human Services*
HMSV	*4880*	*Field Work in Human Services*
HMSV	*4890*	*Field Work in Human Services*

Field Work in Human Services

Listed below are two options for Field Work. Since some agencies only accept one or the other option for placements, it is essential for a student to plan well in advance in order to know if placement begins in the fall or spring, as well as to complete all prerequisites to Field Work at least one semester prior to placement.

- Block Placement: 12 credits, involving 36 hours weekly for one semester (fall or spring)
- 18 hours weekly for two semesters (6 credits each) beginning in the fall and continuing until the end of the spring semester

Admission into the Human Services Program does not guarantee entry into Field Work. Eligibility for Field Work is assessed by the Human Services Review Committee according to the criteria established in Academic Policies and Procedures section.

B. Human Services/Behavioral Sciences Area*

Required Liberal Arts and Sciences courses include:

PSY	*2200*	*Human Growth and Development***
PSY	*2350*	*Abnormal Psychology*

A minimum of 9 credits in Behavioral Sciences, at least 6 of which must be in Human Services; the remaining 3 credits may be chosen from Psychology, Sociology, or Human Services.

*** *With the documented approval of their Human Services advisor, students may substitute three courses in developmental psychology in place of Human Growth and Development. These courses* ***must include*** *PSY 2210 (Child Psychology) and PSY 2230 (Adolescent Psychology),* ***plus either*** *PSY 2240 (Adult Development) or PSY 2260 (Gerontology).*

C. Related Courses*

Students must take 9 credits in courses in departments other than Behavioral Sciences following these requirements:

- Courses must be relevant to career goals and Field Work plans
- Courses must be taken in one or more departments, e.g. Business Administration, Computer Sciences, Special Education, Political Science, Economics, English, Biology, Philosophy, Physical Education, Speech, etc.

** Courses must be approved by a student's Human Services advisor. Notation to that effect must be placed in the student's folder.*

D. Government Knowledge Requirement

Graduates of the Human Services Program are required to demonstrate knowledge of Federal and State Government. Students may meet this requirement in one of two ways:

- Passing a written examination on the state and federal constitutions administered by the Department of Social Sciences
- Successfully completing one of the following courses: State and Urban Government, U.S. Government, Civil Rights and Civil Liberties, Introduction to the Legal Process, United States History I, United States History II.

Physical Education Specializations in Human Services

Students in Human Services may specialize in Dance, Recreation, or Dance/Recreation by:

- Selecting four 3-credit professional preparation courses
- Selecting four 1-credit physical activity courses under the guidance of the Physical Education Department

Voluntary Experiences

It is to the student's advantage to gain experiences in agencies beyond those required in courses. Wherever students work, they should obtain letters of recommendation for their placement folders. This aids students in course work at Fitchburg State College and also when applying for employment or to graduate school.

Policy Regarding Liability Insurance

Liability Insurance is required of all other students taking Human Services courses which involve a practicum experience. Students have coverage under a blanket policy purchased by the college.

Industrial Technology

Chairperson

Stanley Bucholc

Professor	***Associate Professors***	***Assistant Professors***
Robert Kokernak	*Stanley Bucholc*	*James Andrews*
Luther Tabor	*Lloyd Harte*	*Edson Phelps*
	Edward Martens	*Steven Therrien*
	Sanjay Kaul	

Objectives for the Program in Industrial Technology

The Industrial Technology Department is unique at Fitchburg State College in that it offers two major degree programs and seven concentrations, including:

- Bachelor of Science in Education, with a major in Technology Education (124 semester hours)
- Bachelor of Science in Industrial Technology (120 semester hours), with concentrations in Construction Technology, Electronics Engineering Technology, Graphic Arts Technology, Manufacturing Engineering Technology, Architectural Technology, or Energy Engineering Technology.

Requirements for the Major in Technology Education (Grades 5-12)

The Technology Education Program prepares students for a teaching career. Successful completion of the 43 credit major enables the graduate to meet the provisional certification requirements of the Commonwealth of Massachusetts. In addition to the Education Major the program requires a major in the Liberal Arts or Sciences. Upon certification, the graduate is eligible to teach in the public schools (grades 5-12) in the common core cluster areas of:

- Communication
- Construction
- Manufacturing
- Power Energy and Transportation

Students complete two courses in each of the four clusters for a total of 24 semester hours. These required courses are designed to provide the individual with minimum technical competencies necessary to teach technology education at the public school level. Basic fundamental processes and safety techniques are presented. Lastly, the professional sequence (15 semester hours) provides the students with a combination of theoretical and practical experiences in educational pedagogy.

Criteria for Admission

To enroll in student teaching, the candidate must have a 2.5 cumulative average for all Technology Education courses, have successfully completed a first aid course, and have received a positive recommendation from the faculty of the Industrial Technology Department, as well as have completed:

PSY	*1100*	*General Psychology*
PSY	*2230*	*Adolescent Psychology*
PHIL	*2000*	*Philosophy of Education*

Provisional Track Common Technical Core (24 semester hours)

Manufacturing Cluster

ITEC 1200 Metal Fabrication Systems
ITEC 1300 Wood Fabrication Systems

Communications Cluster

ITEC 1400 Technical Drawing
ITEC 1500 Graphic Arts Processes

Construction Cluster

ITEC 2310 Construction Systems
ITEC 2400 Architectural Drawing

Power Energy and Transportation

ITEC 2600 Energy Systems I
ITEC 3600 Energy Systems II

Professional Sequence (15 semester hours)

ITEC 3800 Methods in Teaching T.E.
ITEC 4840 Prepracticum Seminar
ITEC 4860 Practicum in T.E.

Requirements for the Major in Industrial Technology

The concentrations offered in the Industrial Technology Program were developed with the intention of providing a pool of highly skilled technologists who can sustain the needs of industry within the Commonwealth as we approach the 21st century.

The concentrations include:

- Architectural Technology
- Construction Technology
- Electronics Engineering Technology
- Energy Engineering Technology
- Graphic Arts Technology
- Manufacturing Engineering Technology
- Technical Theater Arts

Required Core Courses (15-18 semester hours)

ITEC 1000 Electric Systems and Circuits
ITEC 1100 Electronics I
ITEC 1200 Metal Fabrication Systems
ITEC 1300 Wood Fabrication Systems
ITEC 1310 Materials Testing
ITEC 1400 Technical Drawing
ITEC 1500 Graphic Arts Processes
ITEC 1600 Energy Systems I
ITEC 1700 Evolution of Industrial Technology
ITEC 1710 Technical Analysis
ITEC 1720 Computers in Industrial Technology

In addition to required courses, students select concentration electives with the help of a department advisor to enhance their technical competence. Courses from the math/science curriculum are also required in each concentration.

Specializations for the Major in Industrial Technology

Architectural Technology Concentration

The Architectural Technology Concentration is designed to develop the technical, analytical, and artistic abilities required to perform the design and planning activities involved in architectural projects and architectural related areas. The planned course sequence introduces architecture from a sound base in academic studies which is followed by a comprehensive study of design and its applications. The program continues with a study of technical systems in architecture, and ends with the development of professional practices. The learning activities throughout the program simulate the tasks that architectural professionals encounter.

Required courses (51 semester hours)

ITEC 1320 Construction Systems I
ITEC 1450 Architectural Graphics
ITEC 2310 Construction Systems II
ITEC 2400 Architectural Drawing
ITEC 2410 CAD
ITEC 2450 Theory of Architecture
ITEC 2630 Power and Lighting
ITEC 3220 Product Modeling and Rendering
ITEC 3300 Estimating and Bidding
ITEC 3310 Mechanical and Plumbing Systems
ITEC 3340 Construction Systems II
ITEC 3410 Drafting Commercial Structures
ITEC 3430 Architectural Design I
ITEC 3460 Architectural Design II
ITEC 3930 Strength of Materials
ITEC 4350 Site Planning
ITEC 4470 Professional Practice

Construction Technology Concentration

The Construction Technology Concentration provides students with information essential for managerial personnel in the construction industry. Students are exposed to a planned sequence of courses preparing them for on-site construction related activities. These include the coordination of workers, materials, subcontractors, and local, state, and federal regulatory agencies.

Required Courses (30 semester hours)

ITEC 1320 Construction Systems I
ITEC 2310 Construction Systems II
ITEC 2400 Architectural Drawing
ITEC 3300 Estimating and Bidding
ITEC 3310 Mechanical and Plumbing Systems
ITEC 3320 Construction Supervision
ITEC 3340 Construction Systems II
ITEC 3410 Drafting Commercial Structures
ITEC 3930 Strength of Materials
ITEC 4310 Seminar in Construction

An additional 15 semester hours of technical electives are required to complete the program.

Electronics Engineering Technology Concentration

The Electronics Engineering Concentration prepares students for positions in the challenging field of electronics by developing the theoretical and practical skills required for this discipline. The skills students need are acquired through a planned sequence of courses involving classroom work in conjunction with hands-on experience utilizing the most modern testing and measuring equipment.

Required Courses (30 semester hours)

ITEC	*2100*	*Electronics II*
ITEC	*2710*	*Statics*
ITEC	*2730*	*Automated Manufacturing and Robotics*
ITEC	*3100*	*Electronics III*
ITEC	*3110*	*Digital Electronics*
ITEC	*3120*	*Control Theory*
ITEC	*3910*	*Engineering Experimentation*
ITEC	*4100*	*Industrial Electronics*
ITEC	*4110*	*Electronic Communication Systems*
ITEC	*4120*	*Microprocessor-Based Control*

An additional 12 semester hours of technical electives are required to complete the concentration.

Energy Engineering Technology Concentration

The Energy Engineering Technology concentration enables students to develop expertise in the areas of power and energy utilization, conservation, auditing and energy engineering. Field and laboratory applications in the areas of electricity usage, heating, ventilation and air conditioning, solar energy, photovoltaic use wind generation, performance contracting and other areas are studied to understand energy utilization problems and solutions that can be applied in many industries. The concentration integrates formal classroom instruction with applied laboratory work, field practice and experience for a career in this discipline. The following technical courses (27 semester hours) are required in the concentration:

ITEC	*1600*	*Energy Systems I*
ITEC	*1650*	*Energy Resources and the Environment*
ITEC	*2600*	*Energy Systems II*
ITEC	*2630*	*Power and Lighting Systems*
ITEC	*3310*	*Mechanical Plumbing Systems*
ITEC	*3600*	*Energy Conservation and Principles*
ITEC	*3650*	*Co-generation and Waste Recovery System*
ITEC	*3910*	*Engineering Experimentation*
ITEC	*4600*	*Performance Contracting for Energy Systems*

An additional 15 semester hours of technical electives are required to complete the program.

Graphic Arts Technology Concentration

The Graphic Arts Concentration provides students with technical experience in the printing and publishing industry. Students learn
up-to-date printing methods that insure high quality and appropriate expertise to coordinate the technical effects in a modern printing plant.

The following technical courses (24 semester hours) are among those required to develop within the student the skills necessary to function in the Graphics Industry:

ITEC	*1510*	*Typography*
ITEC	*1720*	*Computers in Industrial Technology*
ITEC	*2500*	*Offset Lithography*
ITEC	*2520*	*Graphic Design*
ITEC	*2550*	*Screen Printing*
ITEC	*3510*	*Production Printing*
ITEC	*3520*	*Printing Estimating and Production Control*
ITEC	*4520*	*Seminar in Graphic Arts*

An additional 24 semester hours of technical electives are required to complete the program.

Manufacturing Engineering Technology Concentration

The concentration is designed to develop both technical and analytical competencies required of entry-level positions within manufacturing engineering support. Students are trained to become resourceful, technically competent people who can interface between engineering and other personnel within the manufacturing environment.

The competencies are acquired through a sequence of courses involving laboratory experiments and additional course work within the Math/Science curriculum. This combination provides the student with the practical knowledge of manufacturing processes, the ability to apply these processes, and the ability to plan, coordinate, and implement aspects of production projects.

Required Courses (42 semester hours)

ITEC	*1200*	*Metal Fabrication*
ITEC	*1300*	*Wood Fabrication*
ITEC	*1310*	*Materials Testing*
ITEC	*2410*	*Computer Aided Drafting*
ITEC	*2710*	*Statics*
ITEC	*2730*	*Automated Manufacturing and Robotics I*
ITEC	*2740*	*O.S.H.A.*
ITEC	*2750*	*Plastic Technology*
ITEC	*2900*	*Designing and Planning*
ITEC	*3700*	*Fluid Power Technology*
ITEC	*3710*	*Quality Control*
ITEC	*3730*	*Robotics II*
ITEC	*3900*	*Production Planning and Control*
ITEC	*3910*	*Engineering Experimentation*
ITEC	*3930*	*Strength of Materials*

An additional 9 semester hours of technical electives are required to complete the program. One option in this area are courses in plastic technology.

Technical Theater Track

The Technical Theater track is designed to develop a general base of technical, analytical, managerial, and creative competencies aimed toward entry positions in fields of theatrical production. Students are trained to become resourceful, imaginative, and technically competent people who can integrate engineering and artistic techniques with theatrical situations. Students will acquire these competencies through lectures, laboratories, and actual stage productions. These learning activities, accompanied by those of other course selections, provide for a general knowledge of theater, and the ability to apply these skills to theatrical situations.

Electives and internships provide flexibility through which individuals can pursue areas of special interest. The following courses (36 S.H.) are required in the concentration:

Required Courses (36 semester hours)

ITEC	*2410*	*Computer Aided Drafting*
ITEC	*3900*	*Production Planning and Control*
TETA	*2100*	*Theatrical Design Skills*
TETA	*2300*	*Fundamentals of Stage Lighting*
TETA	*2400*	*Scene Design*
TETA	*2500*	*Costume Design*
TETA	*3300*	*Stage Lighting Design*
TETA	*3400*	*Advanced Scene Design*
TETA	*3500*	*Advanced Costume Design*
TETA	*3600*	*Make Up*
TETA	*4100*	*Stage Management*
TETA	*4940*	*Theater Internship*

An additional 9 semester hours of approved electives are required to complete the program.

Internships

Senior status students in all concentrations are eligible to participate in the Internship Program. The Internship allows a student with an appropriate grade average to receive up to 12 academic credits for a one semester work experience.

The Minor in Industrial Technology

The minor in Industrial Technology offers a choice of five concentrations:

Manufacturing Technology

ITEC	*1310*	*Materials*
ITEC	*2410*	*CAD*
ITEC	*2720*	*Robotics I*
ITEC	*3730*	*Automated Manufacturing and Robotics II*
		Two approved electives

Construction Technology

ITEC	*2310*	*Residential Systems*
ITEC	*2400*	*Architectural Drawing*
ITEC	*3300*	*Estimating and Bidding*
ITEC	*3320*	*Construction Supervision*
		Two approved electives

Electronics Engineering Technology

ITEC	*1100*	*Electronics I**
ITEC	*2100*	*Electronics II**
ITEC	*3100*	*Electronics III**
		Three approved electives

** Students with equivalent course may substitute technical elective.*

Graphics Arts Technology

ITEC	*1500*	*Graphics Arts Processes or*
ITEC	*2500*	*Offset Lithography*
ITEC	*2520*	*Graphic Design* ***or***
ITEC	*3520*	*Printing Estimating and Production Coordination*
COMM	*3810*	*Graphics I*
		Two approved electives

Industrial Training

ITEC	*2720*	*Computers in Industrial Technology*
ITEC	*3800*	*Methods of Teaching Technology Ed.*
ITEC	*3810*	*Curriculum Development in Technology Ed.*
		Three approved electives

Prerequisites: Application and departmental approval; prerequisites may be waived based upon an individual's experience and background.

For the Interdisciplinary Graphics Minor, see Graphics.

Interdisciplinary Requirement

Each student is required to complete at least two interdisciplinary courses as part of the Common Graduation Requirements in the Liberal Arts and Sciences Program. These courses are often described in the discipline most closely associated with the interdisciplinary course. Students should refer to the course description section of the catalog that follows this section for specific course descriptions either under "Interdisciplinary" or other designated sections.

Industrial/Organizational Psychology

Chairperson
John Hancock

Objectives for the Program in Industrial/Organizational Psychology

The Program in Industrial/Organizational Psychology will provide students with the skills required for successful employment in the fields of management, supervision, and human resources. The minor in Industrial/Organizational Psychology will be especially useful for business majors who want to pursue careers in human resources or staff management.

Requirements for the Minor in Industrial/Organizational Psychology

The minor in Industrial/Organizational Psychology will require a total of 19 semester hours and will include the following courses:

Required Courses

PSY	*1100*	*General Psychology*
PSY	*2110*	*Research Methods*
PSY	*2370*	*Interpersonal Effectiveness*
		Practicum in Industrial/Organizational Psychology (1 semester hour)

Electives

Choose three courses:

PSY	*2610*	*Organizational Effectiveness*
PSY	*2620*	*Work and the Individual*
PSY	*2630*	*Human Factors*
PSY	*2640*	*Performance Appraisal and Development*
PSY	*2650*	*Personnel Psychology*

International Studies

Chairperson
Pasquale Micciche

Objectives for the International Studies Program

The International Studies Program provides students in all majors with the opportunity to examine international historical and current issues to increase their global awareness and their abilities to interact with peoples from diverse cultures. A minor in International Studies is offered by the program.

Requirements for the Minor in International Studies

The minor in International Studies has several options. Students should consult an advisor to select the option best suited to their interests. A total of 18-credits is required for the minor.

Required

IDIS 1200 Introduction to International Studies

At least three courses in the minor must be at the 2000 level or above

At least one course must be selected in three of the following categories:

- History, Political Science and Anthropology
- Business and Economics
- Art, Music or Dance
- Language, Literature, Culture or Philosophy

For a complete list of courses which can be used in the International Studies minor, consult your advisor.

Mathematics

Chairperson
Gerald Higdon

Professors	***Associate Professors***	***Assistant Professors***
Richard Bisk	*Gerald Higdon*	*Robert Bentley*
Christine Cosgrove	*Claire McAndrew*	*Mark Snyder*
Lucy Dechene	*Abdulkeni Zekeria*	
Barry Light		

Objectives for the Program in Mathematics

The Department of Mathematics serves all students at the college. Mathematics majors receive a comprehensive foundation in abstract and applied mathematics as preparation for graduate school or a professional career. Minors in Mathematics receive the mathematical foundation needed for advanced work in their major field.

The department also provides non-majors with courses for their major or with courses for their Liberal Arts and Sciences Program.

Requirements for the Major in Mathematics

The Bachelor of Science and the Bachelor of Arts in Mathematics is comprised of 42 credit hours of course work, including the following requirements:

MATH	*2300*	*Calculus I*
MATH	*2400*	*Calculus II*
MATH	*3300*	*Calculus III*
MATH	*3400*	*Calculus IV*
MATH	*2500*	*Introduction to Mathematical Thought*
MATH	*2600*	*Linear Algebra*
MATH	*4300*	*Abstract Algebra*
MATH	*3900*	*Mathematics Seminar*

At least 15 additional semester hours of advanced mathematics (3000 or 4000 level, nine of which must be at the 4000 level

One course in Computer Science at the level of CSC 1500 or higher

Note: MATH 4850, MATH 4860, and MATH 4870 are not advanced mathematics courses.

Graduate courses may be substituted for 4000 level courses. The Bachelor of Arts degree requires foreign language proficiency at the second year level.

Mathematics majors fulfill the Listening and Speaking Requirements of the Liberal Arts and Sciences program by successfully completing one of the following three courses:

SPCH	*1000*	*Introduction to Speech Communication*
SPCH	*1100*	*Argumentation and Debate*
SPCH	*1200*	*Business and Career Communication*

Provisional Certification for Teaching Mathematics

Students interested in teaching Mathematics at the secondary level need to complete the provisional certification track. The requirements are as follows:

Major: Mathematics
(42 total credits, including MATH 3000 and MATH 4200)

Core Courses

PSY	*2230*	*Adolescent Psychology*
MATH	*2860*	*Introduction to Secondary School Teaching*
ENGL	*4700*	*Teaching Writing in Secondary Schools*
MATH	*4850*	*Special Methods in Mathematics*
MATH	*4860*	*Mathematics Practicum in Secondary School (150 hrs.)*
MATH	*4870*	*Mathematics Practicum in Secondary School (150 hrs.)*

Requirements for the Minor in Mathematics

A minor in Mathematics is comprised of 23 semester hours broken up as follows:

- Eleven semester hours of Calculus I, II, and III
- Either Abstract or Linear Algebra
- Three elective courses chosen from Introduction to Mathematical Thought or any mathematics course at the 3000 or 4000 level. At least one of the three electives must be at the 4000 level.

Music

Chairperson
Jane Fiske

Professors
Frank Patterson

Associate Professor
Robin Dinda
Jane Fiske

Objectives for the Program in Music

The Program in Music provides students with the opportunity to actively engage in music through instrumental or choral work. Courses are designed to fulfill the arts requirement in the Liberal Arts and Sciences Program and to study the history of music at different times across many cultures. A minor is also available.

Requirements for the Minor in Music

The minor in Music requires 18 semester hours of course work. Students must take the following:

MUSC	*1000*	*Art of Music* **or**
MUSC	*2000*	*Commonwealth of the Arts*
MUSC	*2200*	*Basic Music Theory*
MUSC	*4500*	*Harmony I*
MUSC	*4000*	*Choral Arts* **or**
MUSC	*4100*	*Instrumental Arts (3 credits)*

The remaining 6 semester hours may be taken from approved music electives.

Nursing

Chairperson
Sophia Harrell

Professors
Sheila Fredette
Sophia Harrell
Barbara Madden
Andrea Wallen

Associate Professors
Barbara Cammuso
Elizabeth Fisk
Mildred Marion
Barbara May
Elizabeth May
Valerie McCarthy
Linda McKay
Carol Picard
Tanya Ratney
A. Lynne Wagner
Jean Worfolk

Assistant Professors
Jaanne Chapman
Barbara Powers
Ann Scannell
Elizabeth Shaw
Richard Trifilo
Eleanor Turnbull

Part-Time Instructors
Michele Brady
Jean Kressy
Gail Liston
Tara Mariolis
Judith Mizhir

Objectives for the Program in Nursing

The degree offered is the Bachelor of Science with a major in nursing. The purpose of the program in nursing is to prepare practitioners of professional nursing who can assume responsibility for planning and providing health care to individuals, families, and groups in a variety of settings in collaboration with other professionals. The program also provides a solid foundation for graduate study in nursing.

Description of the Program in Nursing

As the first Department of Nursing in the State College System, the Nursing Program has a long and proud history. It is:

- Approved by the Board of Registration in Nursing
- Accredited by the National League for Nursing Accrediting Commission
- Supporting of a chapter of Sigma Theta Tau, the International Nursing Honor Society
- Supporting of a chapter of the National Student Nurses Association

It provides not only newly-renovated laboratories for on-campus practice of clinical skills with computer and audiovisual support, but also a wide variety of client care opportunities in affiliated health care agencies. Its graduates are in great demand in the professional job market, and many have progressed to leadership positions in practice, administration, research, and education.

Criteria for Admissions and Retention

The majority of departmental admissions are freshmen selected from qualified high school graduates. One year of high school chemistry is required for admission into the nursing major. The department also admits transfer students, who are not licensed nurses, but who meet the prerequisites for the sophomore year courses, as well as registered nurses who meet the prerequisites of the alternative junior year.

Registered nurses are provided with a variety of opportunities to achieve advanced placement in Liberal Arts and Sciences courses and in nursing via the CLEP program, College examinations, Nursing Mobility Profile II examinations, and a Portfolio Review Process.

As a professional preparation program, successful progress in the major necessitates requirements in addition to those common to all college students. These include:

- 2.00 or better in Anatomy and Physiology I and II and General Chemistry I and II.
- 2.00 or better in all required nursing courses. Students may repeat a failed nursing course one time. Failure to achieve a 2.00 when a course is repeated will result in dismissal from the major. The repeat policy may be used one time during the course of study.
- Students are responsible for providing their own transportation to clinical practice sites.
- Annually, prior to participation in any clinical nursing course, students must present evidence to the Department of Nursing of: Hepatitis B immunizations, CPR certification/ recertification, immunizations, and Massachusetts nursing licensure (if applicable). Commonwealth of Massachusetts regulations regarding health records for students enrolled in the health sciences must be met through the campus Health Service office.

It may be necessary for students to take a portion of their clinical in the summer.

Requirements for the Major in Nursing

Graduation requires a minimum of 124 semester hours of credit comprised of:

- 64 credit hours of nursing
- 35 hours of required core courses
- 27 hours of elective Liberal Arts and Sciences credits

Each semester of nursing after the pre-nursing freshman year includes a clinical/laboratory component as well as classroom theory. A variety of inpatient and community agencies in central and eastern Massachusetts offer practice opportunities to assist students toward professional competency.

To provide majors with assistance to meet the progression requirements and achieve success in the program, the department uses individual academic and personal advising by nursing faculty, referrals to campus services, and internal departmental resources. Under this advisement, all senior students select an area of nursing practice for concentrated study in accordance with individualized learning objectives.

Part-time study is available to majors in lower division course work and to registered nurse students.

Philosophy

Chairperson
Jane Fiske

Professors
James Colbert
Richard Glidewell
Walter Jeffko

Associate Professor
Ali Errishi

Objectives for the Program in Philosophy

The Philosophy program provides a variety of courses which fulfill requirements in the Liberal Arts and Sciences Program. These courses explore philosophical inquiry from its beginnings to the present, reviewing the history of ideas and the development of ethical systems. A minor is also available.

Requirements for the Minor in Philosophy

The Philosophy Minor requires 15 semester hours. There is a prerequisite of PHIL 1000 or PHIL 1100. Courses for the minor must include:

PHIL	*3310*	*Ancient Philosophy*
PHIL	*3330*	*Renaissance and Modern Philosophy* **or**
PHIL	*3340*	*Contemporary Philosophy*

At least one course from the following:

PHIL	*2500*	*Contemporary Ethical Problems*
PHIL	*2550*	*Contemporary Ethical Systems*
PHIL	*2600*	*Philosophy of Human Nature*
PHIL	*2660*	*Man and Nature II*
PHIL	*3600*	*Philosophy of Religion*
PHIL	*4500*	*Philosophy of Love*
		Two additional Philosophy courses

Physical Education

Chairperson
Lee N. Cunningham

Professors	***Associate Professor***	***Assistant Professors***
Thomas Battinelli	*James Sheehan*	*Barbara Nole*
Lee N. Cunningham	*David Antaya*	
Caryl Sickul		

Objectives for the Physical Education Program

The Physical Education Program is designed to foster healthy and physically active life-styles and to prepare students professionally in program concentrations related to their major areas of study.

Health and Fitness is the required academic base of the program. Course offerings generally cover instruction in the areas of health and wellness, and exercise and fitness.

General Physical Education is the elective physical activity instructional base of the program. A variety of physical education, recreational, and dance courses are offered. These courses provide opportunities for students to participate in recreational activities aimed at the development of physical fitness, performance, and skills for present as well as future use.

Interdisciplinary majors in Biology/Exercise Science and Business Administration/Fitness Management provide students with an opportunity to prepare for employment in the Health and Fitness fields. Minors in Physical Education, Dance, and Recreation are available to all students.

Health and Fitness Requirement

All students must satisfy a three hour credit requirement in Health and Fitness.* This requirement may be met by the successful completion of one of the following three group options. All of the group options are taught in a lecture/laboratory manner and include a physical activity component.

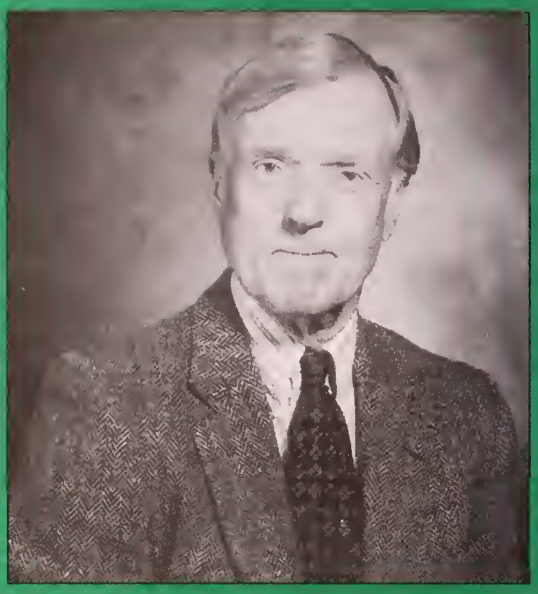
Option I—One course from Group I

Option II—Three courses from Group II

Option III—Two courses from Group II and one from Group III

** Nursing majors must satisfy a one-credit hour requirement which can be met by the successful completion of one course from Group II or Group III. (Exceptions: Consumer Health and Standard First Aid) Honors students must satisfy a two credit hour requirement. This may be met by the successful completion of Leadership in the Outdoors and Consumer Health.*

P R O F I L E



Lee Cunningham
Professor of Physical Education

As Professor of Physical Education, Lee Cunningham not only teaches Health and Fitness, Exercise Physiology, and the Biomechanics of Sport, but he practices what he teaches as a long distance runner and cyclist who has completed 25 marathons. By securing grants from commercial as well as state organizations, Professor Cunningham established the Exercise Science Lab at the College for evaluating and studying Bio Exercise Science. Lee recently agreed to coordinate the General Studies Major for day students. A community leader and published author, Lee is a thirty year veteran of the Fitchburg State College staff.

Requirements for the Interdisciplinary Majors

Biology/Exercise Science

Course Requirements

PHED	*3070*	*Exercise Physiology*
PHED	*4040*	*Motor Learning and Physical Performance*
PHED	*4120*	*Biomechanics of Sport*
BIOL	*4950*	*Internship*

Business Administration/Fitness Management

Course Requirements

BIOL	*1200*	*Anatomy and Physiology I*
BIOL	*1300*	*Anatomy and Physiology II*
BIOL	*1650*	*Nutrition*
PHED	*2090*	*First Aid/Adult CPR*
PHED	*3060*	*Exercise, Nutrition and heart Disease*
PHED	*3070*	*Exercise Physiology*
PHED	*4030*	*Physical Education, Fitness and Sport: An Overview*
PHED	*4170*	*Exercise Testing and Prescription*
PHED	*4950*	*Internship*
PHED		*Physical Activity or Dance Elective*

Requirements for the Minor in Physical Education

Physical Education Concentration

Course Requirements

PHED	*3070*	*Exercise Physiology*
PHED	*3080*	*Scientific Foundations of Strength Training and Conditioning*
PHED	*4030*	*Physical Education, Fitness and Sport: An Overview*
PHED	*4040*	*Motor Learning and Physical Performance*

Note: Education (Elementary and Secondary) and Human Services Majors in Human Services may substitute Recreational Leadership (PHED 4010) and Camp Counseling (PHED 4020) in place of Motor Learning and Physical Performance and Scientific Foundations of Strength Training and Conditioning.

Dance Minor

Theory/History/Performance

Select three courses:

PHED	*4050*	*Art of Dance (Spring Semester, Summer School, or Winter Session)*
PHED	*4070*	*Introduction to Dance Movement Therapy*
PHED	*4100*	*Movement Education*
PHED	*4130*	*Making Dances: Choreography and Composition (Spring Semester, Summer School, or Winter Session)*
PHED	*4900*	*Independent Study/Practicum*

Technique Courses

Select three courses:

PHED	*1130*	*Dance Aerobics*
PHED	*1210*	*Modern Jazz I*
PHED	*1220*	*Modern Jazz II*
PHED	*1230*	*Modern Jazz III*
PHED	*1310*	*Afro Jazz Dance*

Recommended Elective

The additional three credits can be taken from any of the above courses or the following:

THEA	*4200*	*Children's Theatre*
THEA	*4250*	*Stagecraft and the Theatre Production (Spring Semester)*
THEA	*4300*	*Mime and Movement*

Human Services/Recreation Concentration

Recreation Course Requirements

PHED	*4010*	*Recreational Leadership*
PHED	*4060*	*Outdoor Education*
PHED	*4110*	*Programs in Recreation*
PHED		*Recreational Management*

Physical Activity Course Requirements

PHED	*1130*	*Dance Aerobics*
PHED	*1150*	*Canoeing*
PHED	*1170*	*Introduction to Mountain Hiking*
PHED	*1180*	*Backpacking*
PHED	*1200*	*Cross-Country Skiing*
PHED	*1220*	*Modern Jazz*
PHED	*1250*	*Bicycle Touring*
PHED	*1280*	*Orienteering*
PHED	*1300*	*Recreational Sports*

Physics

Chairperson
Robert J. Gardula

Professor	***Associate Professor***	***Assistant Professors***
Esmail Valanejad	*Ali Errishi*	*Lawrence Guth*
		Jiang Yu

Objectives for the Physics Program

The Physics Program offers a variety of courses which fulfill the laboratory science requirement for all students.

PHYS 1010, 1020, 1030, and 1040 are for non-science majors and are strongly recommended for satisfying the Liberal Arts and Sciences requirements.

PHYS 1300 and 1400 are the standard non-calculus General Physics courses offered at most baccalaureate institutions. The sequence is taken by chemistry, mathematics, and most industrial technology majors. They are also appropriate to the non-science major interested in applying mathematical problem-solving techniques to physical settings.

PHYS 2100, 2200, 3100, 3200, 4100, and 4200 are all advanced courses that are offered from time to time in the form of free electives to those students who have had PHYS 1300 and 1400 and have shown keen interest in physics and mathematics.

Political Science

Chairperson
Pasquale E. Micciche

Assistant Professor
Eric Budd

Objectives for the Program in Political Science

Courses in Political Science are intended for any student with a general interest in politics and government. They are also designed to provide a proper background for students interested in pursuing graduate study or a career in law, public administration, or government and political science.

Requirements for the Major in Political Science

The Bachelor of Science and Bachelor of Arts in Political Science require 36 hours of course work. All BA and BS candidates will pick an area of concentration after consulting with their faculty advisor.

Required Courses

POLS	*1000*	*U.S. Government*
POLS	*1100*	*Introduction to Political Science*
POLS	*2200*	*Contemporary International Relations*
POLS	*4200*	*Political and Social Philosophy*

Concentration

With the assistance of their academic advisor, each student will select an area of concentration. Possible areas of concentration are American Government/Law or International Politics.

Electives

One of the electives must be a capstone course. For their capstone course, students can select any one of the following courses:

Internships in Political Science
Legal Internship
Senior Seminar in Political Science

Requirements for the Minor in Political Science

The Minor in Political Science includes:

Required Courses

POLS	*1000*	*U.S. Government*
POLS	*1100*	*Introduction to Political Science*

Electives

Choose four courses from at least two of the following three subfields: American Government, International Politics, and Public Policy/Public Administration.

Psychology

Chairperson
John Hancock

Coordinator
Cheryl Armstrong

Professors
Alan Bernstein
G. Jefferson Breen
Carol Globiana
Paul Girling
Peter Hogan
Anita Hotchkiss
David Maloney
Richard Spencer

Assistant Professors
Cheryl Armstrong
Michael Bloomfield
John Hancock
Richard Kruse
John Solin
Robert Wellman

Objectives for the Program in Psychology

The goal of the Psychology Program is to educate students in the scientific study of human behavior. The program combines theoretical, methodological, and applied topics enabling students to acquire knowledge and skills that enrich their personal lives and work careers.

The Psychology Program is a component of the Behavioral Sciences Department. It serves majors and minors in the discipline and offers supportive courses for a variety of other programs in the college.

Requirements for the Psychology Major

The degrees of Bachelor of Arts and Bachelor of Science in Psychology require a minimum of 37 semester hours of course work in Psychology, beyond the course in General Psychology. (The Bachelor of Arts degree requires foreign language proficiency at the second year college level.)

The program is divided into three groups of courses:

- Required courses
- Area electives
- Integrated or pre-professional courses

Group I—Required Courses

PSY	*1100*	*General Psychology (not counted toward major)*
PSY	*2110*	*Introduction to Research Methods*
PSY	*2120*	*Psychological Statistics*
PSY	*3410*	*Experimental Psychology*
PSY	*3480*	*History and Systems in Psychology*

Group II—Area Electives

Choose at least one course required from each area:

Area 1—Developmental

PSY	*2210*	*Child Psychology*
PSY	*2230*	*Adolescent Psychology*
PSY	*2240*	*Adult Development*
PSY	*2250*	*Psychology of Women*
PSY	*2260*	*Gerontology*
PSY	*2280*	*Psychology of Human Sexuality*
PSY	*2320*	*Psychology of Death and Dying*

Area 2—Adaptive

PSY	*2160*	*The Psychology of Speech and Communication*
PSY	*2300*	*Psychology of Personality*
PSY	*2330*	*Psychology of Intimacy*
PSY	*2350*	*Abnormal Psychology*
PSY	*2370*	*Interpersonal Effectiveness*
PSY	*2400*	*Psychology of Captivity*
PSY	*2500*	*Social Psychology*
PSY	*2550*	*Group Dynamics*
PSY	*2570*	*Small Group Leadership*
PSY	*2620*	*Work and the Individual*

Area 3—Basic Processes

PSY	*3420*	*Physiological Psychology*
PSY	*3430*	*Perception*
PSY	*3500*	*Psychology of Learning*
PSY	*3530*	*Motivation*
PSY	*3550*	*Cognition*

Area 4—Applied Studies

PSY	*2450*	*Psychological Testing*
PSY	*2610*	*Organizational Psychology*
PSY	*2630*	*Human Factors/Ergonomics*
PSY	*2640*	*Performance Appraisal and Development*
PSY	*2650*	*Personnel Psychology*
PSY	*2710*	*Learning Theory and Its Application*
PSY	*2770*	*Principles of Guidance*

Topics in Psychology, when offered, may serve as a required elective for the appropriate Group II area.

Group III—Integrative or Pre-Professional Courses

At least one course is required:

PSY	*3220*	*Advanced Child Psychology*
PSY	*4800*	*Teaching Practicum*
PSY	*4803*	*Teaching Practicum*
PSY	*4810*	*Practicum in Psychology*
PSY	*4820*	*Practicum in Psychology*
PSY	*4900*	*Independent Study*
PSY	*4920*	*Advanced Psychology Seminar*
PSY	*4940*	*Internship in Psychology*
PSY	*4950*	*Internship in Psychology*
PSY	*4960*	*Internship in Psychology*

The remainder of the nine credits in Psychology may be earned by taking additional courses from Groups II and III.

Requirements for Concentrations in Psychology

Any students majoring or minoring in Psychology may choose to develop special expertise in one of two areas: Developmental Psychology or Industrial/Organizational Psychology. In either case, students should consult the Psychology Student Handbook for guidelines.

Concentration in Industrial and Orgenizational Psychology

This concentration is designed to prepare students to enter a wide range of occupations in business and industry. It is particularly appropriate for students who want to pursue careers in personnel or human resource functions.

The concentration requires students to take 12 semester hours of course work from the courses listed below:

PSY	*2610*	*Organizational Psychology (required)*
PSY	*2620*	*Work and the Individual*
PSY	*2630*	*Human Factors/Ergonomic*
PSY	*2640*	*Performance Appraisal and Development*
PSY	*2650*	*Personnel Psychology*
PSY	*5000*	*Topics in Psychology (where applicable)*

Internships in Industrial and Organizational settings are available and strongly recommended for students taking this concentration.

Concentration in Developmental Psychology

This concentration is appropriate for students who plan to undertake advanced work in developmental psychology or who seek future employment in related fields.

Students must take at least 12 semester hours of course work from two groups of courses:

- Courses in Group I provide an introduction to various topics in developmental psychology
- Courses in Group II provide opportunities for in-depth exploration of issues through basic research and special projects

Group I

Choose three of the following courses:

PSY	*2210*	*Introduction to Research Methods*
PSY	*2230*	*Adolescent Psychology*
PSY	*2240*	*Adult Development*
PSY	*2250*	*Psychology of Women*
PSY	*2260*	*Gerontology: The Psychology of Growing Old*
PSY	*5000*	*Topics in Psychology (where applicable)*

Group III

Choose one of the following courses:

PSY	*3220*	*Advanced Child Psychology*
PSY	*4810*	*Practicum in Psychology*
PSY	*4820*	*Practicum in Psychology*
PSY	*4950*	*Internship in Psychology*
PSY	*4960*	*Internship in Psychology*
PSY	*4900*	*Independent Study (where applicable)*

Requirements for the Minor in Psychology

The minor in Psychology requires a minimum of 18 semester hours of course work beyond the course General Psychology. The Psychology minor is designed to enable the student to:

- Understand and evaluate psychological research and literature
- Choose courses which complement and relate to the major field of study
- Explore a particular interest in psychology in some depth

Accordingly, the following course organization is required:

Group I

Two courses are required.

PSY	*1100*	*General Psychology (prerequisite; not counted towards minor)*
PSY	*2110*	*Introduction to Research Methods*

Group II

At least one course is to be taken from **each** of any three of the four areas described under the major: Adaptive, Applied Studies, Basic Processes, and Developmental.

The remaining required course may be selected from either the integrative courses (Group III) or any one of the above mentioned areas. Courses may also include:

PSY	*2220*	*Human Growth and Development*
PSY	*2750*	*Tests and Measurements*

Public Service Management

Chairpersons

John Hancock
Pasquale Micciche
James Noonan

Objectives for the Program in Public Service Management

The program in Public Service Management is an interdisciplinary Minor from disciplines of Human Services, Business Administration, Political Science, Psychology, Sociology, and Computer Science.

The minor in Public Service Management focuses on the policies and management practices of public service organizations in order to strengthen the knowledge base and skills set of the student interested in a career in those fields serving the public needs.

Requirements for the Minor in Public Service Management

Required Courses (9 semester hours)

HMSV	*3580*	*Social Welfare Policy* **or**
POLS	*3000*	*Public Policy Analysis*
HMSV	*3000*	*Human Services Management or Public Administration*
POLS	*3000*	*Public Policy Analysis*
HMSV	*1150*	*Community Resource Management or Budgeting in Not-for-Profit Entities*

Elective Courses (9 semester hours)

CSC	*1100*	*Computer Applications Programming I*
PSY	*2370*	*Interpersonal Effectiveness*
PSY	*2620*	*Work and the Individual*
SOC	*2650*	*Sociology of the Organization*
BSAD	*3210*	*Human Resources Management*
HMSV	*3400*	*Community Organization*
BSAD	*3500*	*Business Law I*
BSAD	*4210*	*Social and Political Environments of Business*
BSAD	*4250*	*Ethical Decisions in Business*

** Topics course approved by the PSM advisors in Business Administration, Behavioral Sciences, and Social Science.*

Secondary Education (9–12)

Coordinator
Anne May

Clinical Professors
Sibyl Brownlee
Robert Champlin
Marilyn McCaffrey
Mark Snyder
Steven Therrien
Howard Thomas

Objectives for the Program in Secondary Education

A Secondary Education Program is offered for students seeking provisional teaching certification in the following disciplines:

- Biology
- Earth Science
- English
- History
- Mathematics
- Technology Education

Major: Biology

Core Course Requirements

BIOL	*2860*	*Introduction to Secondary School Teaching*
ENGL	*4700*	*Teaching Writing in Secondary Schools*
BIOL	*4850*	*Special Methods in Biology*
BIOL	*4860*	*Biology Practicum in a Secondary School (300 hours)*
BIOL	*4870*	*Biology Practicum in a Secondary School (300 hours)*

Major: Geography

Core Course Requirements

GEOG	*2860*	*Introduction to Secondary School Teaching*
ENGL	*4700*	*Teaching Writing in Secondary Schools*
GEOG	*4850*	*Special Methods in Earth Science*
GEOG	*4860*	*Earth Science Practicum in a Secondary School (300 hours)*
GEOG	*4870*	*Earth Science Practicum in a Secondary School (300 hours)*

Major: English

Core Course Requirements

ENGL	*2860*	*Introduction to Secondary School Teaching*
ENGL	*4700*	*Teaching Writing in Secondary Schools*
ENGL	*4850*	*Special Methods in English*
ENGL	*4860*	*English Practicum in a Secondary School (300 hours)*
ENGL	*4870*	*English Practicum in a Secondary School (300 hours)*

Major: History

Core Course Requirements

HIST	*2860*	*Introduction to Secondary School Teaching*
ENGL	*4700*	*Teaching Writing in Secondary Schools*
HIST	*4850*	*Special Methods in History*
HIST	*4860*	*History Practicum in a Secondary School (300 hours)*
HIST	*4870*	*History Practicum in a Secondary School (300 hours)*

Major: Mathematics

Core Course Requirements

MATH	*2860*	*Introduction to Secondary School Teaching*
ENGL	*4700*	*Teaching Writing in Secondary Schools*
MATH	*4850*	*Special Methods in Mathematics*
MATH	*4860*	*Mathematics Practicum in a Secondary School (300 hours)*
MATH	*4870*	*Mathematics Practicum in a Secondary School (300 hours)*

Major: Technology Education

Core Course Requirements

Common Technical Core (24 semester hours)

Manufacturing Cluster

ITEC	*1200*	*Metal Fabrication Systems*
ITEC	*1300*	*Wood Fabrication Systems*

Communications Cluster

ITEC	*1400*	*Technical Drawing*
ITEC	*1500*	*Graphic Arts Processes*

Construction Cluster

ITEC	*2310*	*Structures I*
ITEC	*2400*	*Architectural Drawing*

Power Energy and Transportation

ITEC	*2600*	*Alternate Energy*
ITEC	*3600*	*Advanced Alternate Energy*

Professional Sequence (15 semester hours)

ITEC	*3800*	*Methods in Teaching T.E.*
ITEC	*4840*	*Prepracticum Seminar*
ITEC	*4860*	*Practicum in T.E.*
ITEC	*4870*	*Practicum in T.E.*

External Requirements for all Secondary Education Minors

Liberal Arts and Sciences Distribution which include:

PSY	*2230*	*Adolescent Psychology*

Sociology

Chairperson
John Hancock

Coordinator
Augustine Aryee

Professor
Augustine Aryee
Margot Kempers

Associate Professors
Patricia Hayes

Assistant Professors
Jason Nwankwo

Objectives for the Program in Sociology

The sociology major was designed to provide students with refined approaches and methods of research and a broad understanding of the world.

The curriculum has been developed to provide the theoretical background and research skills essential for work concerned with human behavior. Graduates of the program are prepared for immediate entry into a wide variety of occupations in business, education, industry, social service, and public service settings. In addition, many graduates continue formal study by enrolling in advanced degree programs in sociology and related fields.

Requirements for the Major in Sociology

The major requires 36 semester hours of course work in Sociology. This total includes a 12 semester hours of core courses and 24 semester hours of electives. Majors are encouraged to take advantage of relevant courses from the other two majors in the Behavioral Sciences Department.

Core Required Courses

SOC	*1100*	*Introduction to Sociology (prerequisite for all other Sociology courses)*
SOC	*2250*	*Cultural Anthropology*
SOC	*3130*	*Basic Skills of Social Research*
SOC	*3160*	*Social Theory*

Speech Requirement

Choose one course

SPCH	*1000*	*Introduction to Speech Communication*
SPCH	*1600*	*Public Speaking*
PSY	*2160*	*Psychology of Speech and Communication*

State and Federal Constitution Proficiency Requirement

Can be fulfilled by passing a written exam administered by the Department of Social Sciences or by completing one of the following courses:

POLS	*1000*	*United States Government*
POLS	*1500*	*State and Urban Government*
POLS	*2270*	*Introduction to the Legal Process*
POLS	*3600*	*Civil Rights and Civil Liberties in the United States*
HIST	*1400*	*United States History I*
HIST	*1500*	*United States History II*

Requirements for the Minor In Sociology

The minor in sociology consists of 18 semester hours in Sociology. There is a core of 9 semester hours including:

SOC	*1100*	*Introduction to Sociology*
SOC	*3130*	*Basic Skills in Social Research*
SOC	*3160*	*Social Theory*

The remaining 9 semester hours may be selected according to student needs and interests from Sociology electives.

Spanish

Chairperson
Jane Fiske

Professors
Maria Jaramillo

Associate Professors
Jeannette Scharf

Objectives for the Program in Spanish

The Spanish Program offers students the opportunity to begin the study of Spanish language and culture or to continue study at an intermediate or advanced level.

Requirements for the Minor in Spanish

The minor in Spanish requires a minimum of 15 semester hours, including the following:

Placement Exam

Students who have taken more than one year of Spanish in high school, but have not yet taken a Spanish course at Fitchburg State College, and students who speak Spanish at home are required to take a Placement Exam if they wish to register for a Spanish course at the course at the college level.

Required Courses

SPAN	*2200*	*Intermediate Spanish I*
SPAN	*2300*	*Intermediate Spanish II*

Electives

Choose at least three from the following:

SPAN	*3000*	*Hispanic Culture*
SPAN	*3300*	*Hispanic Literature I*
SPAN	*3400*	*Hispanic Literature II*
SPAN	*3500*	*Spanish Conversation and Composition*
SPAN	*4903*	*Independent Study*

Special Education

Chairperson
Elaine Francis

Professors
Katherine Flynn
Rosemarie Giovino
Anne May
Shari Stokes

Associate Professors
Michael Fiorentino
Anne Howard

Objectives for the Major in Special Education

The Special Education Department at Fitchburg State College offers the oldest and most comprehensive state program in the Commonwealth of Massachusetts. In this program, emphasis is on theory, content, and the ability to use strategies and resources in working with children and adults who have special needs in the least restrictive or inclusive environment.

This program prepares its graduates to be Teachers of Students with Special Needs (PreK-9) (5-12), and Teachers of Students with Intensive Special Needs (all levels). Students are also prepared for the general education classroom and receive certification as Elementary Teachers (Grades 1-6).

Description of the Major in Special Education

The program has been developed with an underlying belief in the potential of individuals with special needs. Students are involved early in their program with supervised, field-based experiences and academic classes to help clarify career decisions and to develop the knowledge, skills, and attitudes to be effective special educators.

All Special Education majors graduate with a dual major in Special Education and Liberal Arts and Sciences (LA&S). The LA&S major is required by the state of all future teachers. Students are advised by academic advisors in both majors.

In keeping with state certification requirements, graduates (with advanced standing) of the program are eligible for provisional certification (first certificate). Students are required to receive standard certification within five years after employment in Massachusetts as a provisionally-certified teacher. Students with provisional certificates may be employed while completing requirements for standard certification. All certification candidates must satisfy the Constitution requirement of the Commonwealth of Massachusetts. (See "Common Graduation Requirements...")

The Special Education Club, a student chapter of the professional organization Council for Exceptional Children, offers students the opportunity to grow professionally while meeting students with similar interests.

Criteria for Admission to the Department

General Admission

High school students will gain general admission to the teacher preparation program of their choice based on the college's Admission Policy, i.e., students must have a high school GPA of 2.5 unless they fall into the category of exempted students.

Formal Admission to the Teacher Preparation Program

Students with a college GPA of 2.5 (overall) will be formally admitted to the teacher preparation program of their choice at the conclusion of their third semester of matriculation.

Transfer Students

To be formally admitted to the teacher preparation program of their choice transfer students must have a GPA of 2.5 or receive a GPA of 2.5 during their first semester of matriculation.

Criteria for Admission to the Practicum

To be admitted to the practicum students must obtain a GPA of 2.5 in their professional major.

Note: This is consistent with the current policy.

Additional Acceptance Criteria

- Positive recommendations from advisor and department faculty
- Completed application
- Enrollment in or completion of at least one introductory course in the teacher preparation program of choice

Requirements for Teachers of Students with Special Needs (PreK-9 or 5-12)

This program prepares special educators to teach individuals with cognitive, emotional, social, language, and academic problems, who are included in classrooms or are in a variety of special education settings. In addition, students in this program are prepared to meet the certification standards of the State Department of Education for Elementary Teacher.

Required Courses
(*denotes Pre-practicum)

SPED	*2150*	*Introduction to Individuals with Special Needs*
**SPED*	*2521*	*Teaching Children with Special Needs I (Science/Social Studies focus)*
**SPED*	*2522*	*Teaching Children with Special Needs II (Language Arts focus)*
**SPED*	*3401*	*Language Development and Speech*

Integrated Professional Program
(IPP-12 total credits)

IPP Curriculum
(2 afternoons a week)

Reading/Learning Problems

Math/Learning Problems

IPP Pre-Practicum
(in schools 5 mornings)

1/2 semester Elementary

1/2 semester Special Education

Student Teaching
(2 practica: Mon.–Thurs. in school)

1/2 semester Elementary

1/2 semester Special Education

Taken in conjunction with *SPED 3500 Behavior Management Assessment* and *SPED 4001 Assessment of Students with Special Needs*

The Integrated Professional Program

The Integrated Professional Program is a unique experience that fosters the continuous integration of theory and application. It involves a 12 credit block of theoretical courses and teaching in a public school setting. The theory is covered in full day classes (8:30-3:30) during the first three weeks of the semester. For the remainder of the semester students function in the role of the Elementary teacher (1/2 semester) and in the role of the Special Education (1/2 semester). Throughout this semester students receive supervised support by college faculty and cooperating teachers. Two afternoons a week students return to campus for coursework in Reading/Learning Problems and Math/Learning Problems that link theoretical content to teaching strategies.

**Note: Students desiring provisional certification at the secondary level complete field experiences in a middle or high school setting prior to the Integrated Practicum. In the Integrated Practicum they are placed in middle schools or high schools.*

External Requirements

Liberal Arts and Sciences Distribution which include:

ENGL	*2900*	*Children's Literature (PreK-9)* ***or***
ENGL	*2910*	*Literature for Young Adults (5-12)*
GEOG	*1000*	*Introduction to Geography*
PHIL	*2000*	*Philosophy of Education*
PSY	*1000*	*General Psychology*
PSY	*2100*	*Child Psychology*
PSY	*2230*	*Adolescent Psychology (5-12)*
PSY	*2710*	*Learning Theory and Its Application*

One of the following:

SPCH	*1000*	*Introduction to Speech Communication*
PSY	*2160*	*Psychology of Speech and Communication*
PSY	*2370*	*Interpersonal Effectiveness*
PSY	*2550*	*Group Dynamics*
PSY	*2570*	*Small Group Leadership*

A Liberal Arts and Science major is also required for certification.

Requirements for Teachers of Students with Intensive Special Needs (All Levels)

This program addresses the needs of individuals who have severe disabilities, often with accompanying physical, emotional, and behavioral disorders. Curricula focuses on teaching independent living skills so that individuals with intensive special needs can live as independently as possible in home, school, and community environments. Students in this program meet the certification standards of the State Department of Education for Teacher of Students with Intensive Special Needs and Elementary Teacher (Grades 1-6).

Required Courses

(*Denotes Pre-practium)

SPED	*2150*	*Introduction to Individuals with Special Needs*
SPED	*2510*	*Students with Physical and Health Care Needs*
**SPED*	*2521*	*Teaching Children with Special Needs I (Science/Social Studies focus)*
**SPED*	*2522*	*Teaching Children with Special Needs II (Language Arts focus)*
**SPED*	*3401*	*Language Development Speech*

Integrated Professional Program

(IPP 12 total credits)

IPP Curriculum

Reading Learning Problems

Math/Learning Problems

IPP Pre-Practicum

(in schools 5 mornings)

1/2 semester Elementary

1/2 semester Special Education (Intensive)

Student Teaching

(2 practica: Mon.-Thurs. in school)

1/2 semester Elementary

1/2 semester Special Education (Intensive)

Taken in conjunction with *SPED 3500 Behavior Management* and *SPED 2200 Program Development for Students with Intensive Special Needs.*

The Integrated Professional Program

The Integrated Professional Program is a unique experience that fosters the continuous integration of theory and application. It involves a 12 credit block of theoretical courses and teaching in a public school setting. The theory is covered in full day classes (8:30-3:30) during the first three weeks of the semester. For the remainder of the semester students function in the role of the Elementary teacher (1/2 semester) and in the role of the Intensive Special Education (1/2 semester). Throughout this semester students receive supervised support by college faculty and cooperating teachers. Two afternoons a week students return to campus for coursework in Reading, Math, and Learning problems that link theoretical content to teaching in the public schools.

External Requirements

Liberal Arts and Sciences Distribution which include:

BIOL	*1200*	*Anatomy and Physiology*
ENGL	*2900*	*Children's Literature*
GEOG	*1000*	*Introduction to Geography*
PHIL	*2000*	*Philosophy of Education*
PSY	*1000*	*General Psychology*
PSY	*2100*	*Child Psychology*
PSY	*2710*	*Learning Theory and Its Application*

Choose one of the following courses:

SPCH	*1000*	*Introduction to Speech Communication*
PSY	*2160*	*Psychology of Speech and Communication*
PSY	*2370*	*Interpersonal Effectiveness*
PSY	*2550*	*Group Dynamics*
PSY	*2570*	*Small Group Leadership*

A Liberal Arts and Science major is also required for certification.

Speech

Chairperson
Nancy Yee

Professor
Robert Welch

Objectives for the Program in Speech

The Speech Program offers a number of courses to students which meet the Speaking/Listening requirement in the Liberal Arts and Sciences Program for many disciplines. Students should check with their advisors to see which courses are recommended for them.

Theater

Chairperson
Nancy Yee

Associate Professors
Richard McElvain
Kelly Morgan

Objectives for the Program in Theater

The Theater Program serves all students by offering courses that study the history and literature of theater as well as performing arts skills in acting, directory and stagecraft production. Opportunities to perform annual productions are also available. An interdisciplinary major or minor are also available.

Requirements for the Major in English/Theater

The courses required in the major are described under the English major on page 86.

Requirements for the Major in Technical Theater

The courses required for Technical Theater are described under the Industrial Technology major on page 99.

The Minor in Theater

The Theater Minor requires a minimum of 15 semester hours, including Introduction to Theater (THEA 2000), Directing the Play (THEA 4000), and at least 2 of the following courses:

THEA 3000 Statecraft and Theater Production
THEA 2500 Mime and Movement in Theater **or**
PHED 4050 Art of Dance
THEA 2700 Acting **or**
PHED 4130 Making Dances

and at least one of the following courses:

ENGL 3000 World Drama
ENGL 3020 Modern Drama
ENGL 4020 Shakespeare's Drama **or**
ENGL 4030 Shakespeare's Thought

Three hours of Theater internship may also count toward the minor.

Women's Studies

Chairpersons
John Hancock
Pasquale Micciche
Nancy Yee

Coordinators
Nancy Kelly
Margot Kempers

Objectives for the Women's Studies Program

The program in Women's Studies provides multicultural and interdisciplinary courses which examine women's roles, history, and issues. These courses satisfy requirements in the Liberal Arts and Sciences Program and also can be counted toward an interdepartmental minor.

Requirements for the Minor in Women's Studies

The minor in Women's Studies includes the Introduction to Women's Studies and five other courses including independent study, selected from the following courses:

Required Course

IDIS	*1000*	*Introduction to Women's Studies*

Electives

Choose five from the following:

IDIS	*1100*	*Women in Latin America*
ART	*1830*	*Women, Art, and Society*
PSY	*2250*	*Psychology of Women*
IDIS	*2340*	*Contemporary Issues in Women's Health*
HIST	*2450*	*History of U.S. Women to 1870*
HIST	*2500*	*History of U.S. Women from 1870 to the Present*
ENG	*2900*	*Women and Literature*
HIST	*3450*	*History of Women in Europe*
SOC	*3770*	*Women in American Society*
MUSC	*3900*	*Women, Music and Society*
IDIS	*4903*	*Independent Study in Women's Studies*

Worcester School for Professional Crafts

Chairperson
Jane Fiske

Objectives for the Bachelor of General Studies-Crafts

In conjunction with the Worcester Center for Professional Crafts, Fitchburg State College offers a Bachelor of General Studies-Crafts with an emphasis in any one of the following materials: Clay, Fiber, Metals, or Wood.

Criteria for Admission

A student must meet the following criteria for admission to this program:

- Meet the academic standards for admission to the college
- Submit and have approved a portfolio of work
- Complete 60 credit hours in the Liberal Arts and Sciences program before going to complete the Crafts portion of the degree at the Worcester School for Professional Crafts

Requirements for the Bachelor of General Studies—Crafts

The core courses (6 credits each) for all Crafts majors are:

WSPC	*1410*	*Drawing for Crafts*
WSPC	*2410*	*Design for Crafts*
WSPC	*3410*	*Slide Photography and Business Practices*
WSPC	*4410*	*Craft History Seminar*

Clay

The specific sequence of courses in Clay is: (3 credits each)

WSPC	*1010*	*Clay Formulation*
WSPC	*1020*	*Handbuilding in Clay*
WSPC	*1030*	*Design for Clay*
WSPC	*2010*	*Wheel Throwing*
WSPC	*2020*	*Glaze Formulation I*
WSPC	*2030*	*Electric Kilns: Firing and Maintenance*
WSPC	*3010*	*Production Techniques in Clay*
WSPC	*3020*	*Glaze Formulation II*
WSPC	*3030*	*Design for Production Methods*
WSPC	*4010*	*Advanced Clay*
WSPC	*4020*	*Independent Directions in Design*
WSPC	*4030*	*Kiln Design and Construction*

Fiber

The specific sequence of courses in Fiber is: (3 credits each)

WSPC	*1110*	*Weaving I*
WSPC	*1120*	*Surface Design I*
WSPC	*1130*	*Fundamentals of Dye Technology*
WSPC	*2110*	*Weaving II*
WSPC	*2120*	*Textile Design*
WSPC	*2130*	*Surface Design II*
WSPC	*3110*	*Hand Constructed Textiles*
WSPC	*3120*	*Advanced Techniques*
WSPC	*3130*	*Clothing Design Project I*
WSPC	*4110*	*Conceptual Approach to Fiber Art*
WSPC	*4120*	*Interior Objects Design Project*
WSPC	*4130*	*Clothing Design Project II*

Metals

The specific sequence of courses in Metals is: (3 credits each)

WSPC 1210 Design for Metals
WSPC 1220 Surface Enrichment
WSPC 1230 Fabrication I
WSPC 2210 Introduction to Casting
WSPC 2220 Stone Setting
WSPC 2230 Fabrication II
WSPC 3210 Design for Casting
WSPC 3220 Toolmaking and Blacksmithing
WSPC 3230 Mechanisms for Jewelers
WSPC 4210 Personal Directions in Design
WSPC 4220 Advanced Techniques
WSPC 4230 Production Methods

Wood

The specific sequence of courses in Wood is: (3 credits each)

WSPC 1310 Design in Wood
WSPC 1320 Characteristics of Wood Carving
WSPC 1330 Hand Tool Joinery Techniques
WSPC 2310 Furniture Design
WSPC 2320 Construction Techniques
WSPC 2330 Care and Use of Machinery
WSPC 3310 Mechanical Drawing for Furniture
WSPC 3320 Human Factors in Furniture Design
WSPC 3330 Advance Construction Techniques
WSPC 4310 Personal Directions in Design
WSPC 4320 Woodworking Business
WSPC 4330 Advanced Techniques

These courses satisfy the areas of Design, Production, and Technology as well as the Capstone required of General Studies-Crafts students.

Undergraduate Evening Programs

The Division of Graduate and Continuing Education provides quality graduate, undergraduate, and professional programs and courses plus life-long learning, distance learning, and international educational opportunities. In collaboration with faculty, departments, and other constituents, the Division works to ensure excellence in the curriculum and in the teaching/learning process. The Division is committed to providing an accessible and affordable education of exceptional quality. It shares leadership and resources with and draws expertise from its market areas.

Administration

Graduate and Continuing Education is administered by the office of Academic Affairs.

Degree specializations offered by the Division of Graduate and Continuing Education originate in the appropriate academic department of the college. Where there are no corresponding academic departments, committees appointed by the Dean or designee perform the functions of a departmental committee. The Division is responsible, in cooperation with the appropriate academic departments and their curriculum committees, for:

- Maintaining the quality of degree specializations
- Recommending changes in the degree program
- Recommending new courses and new faculty members

Faculty

Courses offered through the Division of Graduate and Continuing Education are taught by the most qualified members of the FSC faculty, who have been chosen for their outstanding experience in a particular field. Competent experts from outside the Fitchburg faculty are brought into the program as Adjunct Undergraduate Faculty.

Degree Majors, Minors, and Certificate Programs

Bachelor's Degrees

BS in Business Administration

- Accounting
- Management
- Marketing
- Finance

BS in Computer Science

BS in Computer Information Systems

BA/BS in General Studies

BS in Occupational/Vocational Education

Minors

English

Psychology

Certificate Programs

Business

Computer Hardware

Computer Use and Applications

Human Resources Management

Office Administration

Plastics Technology
(Offered off-campus at NYPRO Inc. in Clinton only)

Programming in High Level Languages

Programming Languages: COBOL

Web Development

Approval Programs

Vocational Technical Teacher Approval Program

BS in Business Administration

Chairperson
James Noonan

Program Manager
Sylvia Charland

Program Objectives

Students who graduate from the Business Administration Program are equipped with a knowledge of business theories, policies, and procedures and are prepared to take a responsible position within the world of business. The program refines a student's commitment to personal values and moral excellence as well as professional competence.

Program of Study

The degree offered by the Business Administration Department is the Bachelor of Science degree. The curriculum is based in the Liberal Arts, coupled with a sufficient mix of professional courses and a variety of practical business experiences.

BS in Business Administration Concentrations

- Accounting
- Management
- Marketing
- Finance (only offered at night)
- Management Information Systems (only offered during the day)

Liberal Arts and Sciences Requirements

BSAD	*1700*	*Introduction to Computer Information Systems*	*3 S.H.*
ENGL	*1100*	*Writing I*	*3 S.H.*
ENGL	*1200*	*Writing II*	*3 S.H.*
PHED	*1000*	*Health and Fitness*	*3 S.H.*
MATH	*1800*	*Business Statistics*	*3 S.H.*
MATH	*2200*	*Calculus for Business*	*3 S.H.*
ECON	*1000*	*Principles of Economics I (Macro)*	*3 S.H.*
ECON	*1200*	*Principles of Economics II (Micro)*	*3 S.H.*
SPCH	*1000*	*Introduction to Speech Communications*	*3 S.H.*
		Additional Liberal Arts and Sciences requirements	*33 S.H.*
		Subtotal of Liberal Arts and Sciences	*60 S.H.*

Core Curriculum

For All Business Administration Concentrations:

BSAD	*2010*	*Introduction to Financial Reporting*	*3 S.H.*
BSAD	*2020*	*Introduction to Managerial Accounting*	*3 S.H.*
BSAD	*3200*	*Principles of Management*	*3 S.H.*
BSAD	*3300*	*Fundamentals of Marketing*	*3 S.H.*
BSAD	*3400*	*Basic Finance*	*3 S.H.*
BSAD	*3500*	*Business Law I*	*3 S.H.*
BSAD	*4890*	*Business Policy and Strategy*	*3 S.H.*
		Subtotal Core Curriculum	*21 S.H.*

P R O F I L E

Sandra Caligaris-Osborne
Undergraduate Evening Student

Sandra is a mother, a business owner, and a student, who will accept nothing less than to graduate with Honors. A Bachelor's Degree in Business Administration with concentrations in management and marketing is part of Sandra's careful plan to benefit her own business endeavors. Sandra's progress toward graduation was slightly interrupted by the birth of her child, but not for long. She took her final Calculus exam a week after having her baby! Sandra praises the professors and staff for their flexibility and helpfulness in guiding her toward her dream of donning the cap and gown in May 1998.

Specializations for the Major in Business Administration

Accounting Major

Required Courses

BSAD	*3010*	*Financial Reporting Theory and Practice I*	*3 S.H.*
BSAD	*3020*	*Financial Reporting Theory and Practice II*	*3 S.H.*
BSAD	*3120*	*Cost Accounting I*	*3 S.H.*
BSAD	*3130*	*Cost Accounting II*	*3 S.H.*
BSAD	*4010*	*Financial Reporting Theory and Practice III*	*3 S.H.*
BSAD	*4120*	*Individual Taxation*	*3 S.H.*
BSAD	*4140*	*Auditing*	*3 S.H.*
BSAD	*4500*	*Business Law II*	*3 S.H.*
		Electives	*15 S.H.*

Directed Advanced Elective

Choose any one of the following:

BSAD	*4100*	*Consolidation and Mergers*	*3 S.H.*
BSAD	*4130*	*Advanced Taxation*	*3 S.H.*
BSAD	*4160*	*Not for Profit Accounting*	*3 S.H.*

Finance Major

Required Courses

BSAD	*3410*	*Investments*	*3 S.H.*
BSAD	*3460*	*Real Estate Investments and Management*	*3 S.H.*
BSAD	*4230*	*Business Fluctuations and Forecasting*	*3 S.H.*
BSAD	*4400*	*Financial Management of Corporations*	*3 S.H.*
BSAD	*4500*	*Business Law II*	*3 S.H.*
BSAD	*4880*	*International Business Management*	*3 S.H.*
BSAD	*5000*	*Topics in Business*	*3 S.H.*
ECON	*2400*	*Money and Banking*	*3 S.H.*
		Electives	*15 S.H.*

Management Major

Required Courses

BSAD	*3210*	*Human Resources Management*	*3 S.H.*
BSAD	*3220*	*Production Management*	*3 S.H.*
BSAD	*4200*	*Organizational Behavior and Theory*	*3 S.H.*
BSAD	*4210*	*Social and Political Environment of Business*	*3 S.H.*
BSAD	*4230*	*Business Fluctuations and Forecasting*	*3 S.H.*
BSAD	*4880*	*International Business Management*	*3 S.H.*
		Electives	*21 S.H.*

Marketing Major

Required Courses

BSAD	*3310*	*Consumer Behavior*	*3 S.H.*
BSAD	*3320*	*Market Research*	*3 S.H.*
BSAD	*3330*	*Advertising*	*3 S.H.*
BSAD	*4880*	*International Business Management*	*3 S.H.*

Choose any three of the following:

BSAD	*4300*	*Sales Management*	*3 S.H.*
BSAD	*4310*	*Retail Marketing*	*3 S.H.*
BSAD	*4320*	*Industrial Marketing*	*3 S.H.*
BSAD	*4330*	*International Marketing*	*3 S.H.*
BSAD	*4340*	*Developing Marketing Strategies*	*3 S.H.*
		Electives	*18 S.H.*
		Subtotal of Major and Electives	*39 S.H.*
		Total for Degree	***120 S.H.***

BS in Computer Science

Program Objectives

Students who graduate with a degree in Computer Science have developed a unique blend of knowledge and skills in the areas of computer software, hardware, and mathematics. The program is designed to prepare students for positions within organizations that design and engineer hardware and/or software systems in the constantly developing high-technology marketplace.

Program of Study

The degree offered by the Computer Science Department is the Bachelor of Science degree.

Liberal Arts and Sciences Requirements

ENGL	*1100*	*Writing I*	*3 S.H.*
ENGL	*1200*	*Writing II*	*3 S.H.*
PHED	*1000*	*Health and Fitness*	*3 S.H.*
PHYS	*1300*	*General Physics I*	*4 S.H.*
PHYS	*1400*	*General Physics II*	*4 S.H.*
MATH	*2300*	*Calculus I*	*3 S.H.*
MATH	*2400*	*Calculus II*	*3 S.H.*
MATH	*2600*	*Linear Algebra*	*3 S.H.*
MATH	*3100*	*Discrete Algebraic Structures*	*3 S.H.*
		One Mathematics course above Calculus II	*3 S.H.*
		Additional Liberal Arts and Sciences requirements	*30 S.H.*
		Subtotal Liberal Arts and Sciences	*62 S.H.*

Major Required Courses

CSC	*1500*	*Computer Science I*	*3 S.H.*
CSC	*1550*	*Computer Science II*	*3 S.H.*
CSC	*2500*	*Assembly Language Programming*	*3 S.H.*
CSC	*2560*	*Systems Programming*	*3 S.H.*
CSC	*3100*	*Operating Systems*	*3 S.H.*
CSC	*3700*	*Algorithms and Data Structures*	*3 S.H.*
CSC	*1600*	*Introduction to Electronics*	*4 S.H.*
CSC	*1650*	*Digital Electronics*	*4 S.H.*
CSC	*2600*	*Computer Organization*	*4 S.H.*
CSC	*3600*	*Microprocessors*	*4 S.H.*
		Subtotal Major Courses	*34 S.H.*
		Five Computer Science Electives	*15 S.H.*
		Electives in any area to bring total to minimum of 120 semester hours	*9 S.H.*
		Total for Degree	***120 S.H.***

BS in Computer Information Systems

Chairpersons
Robert McGuire
James Noonan

Program Manager
Aparna Mahadev

Program Objectives

The program is designed to prepare students to be systems analysts, programmers, project managers, business analysts, and consultants in business settings by providing them with the opportunity to learn business and computer skills.

The Computer Information Systems Program offers an interdisciplinary major which incorporates courses from both the Business Administration and Computer Science Departments.

Program of Study

Liberal Arts and Sciences Requirements

ENGL	*1100*	*Writing I*	*3 S.H.*
ENGL	*1200*	*Writing II*	*3 S.H.*
PHED	*1000*	*Health and Fitness*	*3 S.H.*
CSC	*1500*	*Computer Science I*	*3 S.H.*
MATH	*1800*	*Business Statistics*	*3 S.H.*
MATH	*2200*	*Calculus for Business*	*3 S.H.*
Select one:			
BSAD	*1700*	*Introduction to Business Data Processing* **or**	*3 S.H.*
CSC	*1100*	*Computer Application Programming I*	*3 S.H.*
Select one:			
ECON	*1000*	*Principles of Economics: Macro* **or**	*3 S.H.*
ECON	*1200*	*Principles of Economics: Micro* **or**	*3 S.H.*
ECON	*1250*	*Introduction to the U.S. Economy*	*3 S.H.*

Major Required Courses

CSC	*1550*	*Computer Science II*	*3 S.H.*
CSC	*2500*	*Assembly Language Programming*	*3 S.H.*
CSC	*2560*	*Systems Programming*	*3 S.H.*
CSC	*2700*	*COBOL-I*	*3 S.H.*
CSC	*3200*	*Programming Languages*	*3 S.H.*
CSC	*3450*	*Local Area Networks*	*3 S.H.*
BSAD	*2100*	*Principles of Accounting I*	*3 S.H.*
BSAD	*2110*	*Principles of Accounting II*	*3 S.H.*
BSAD	*3200*	*Principles of Management*	*3 S.H.*
BSAD	*3300*	*Fundamentals of Marketing*	*3 S.H.*
BSAD	*3400*	*Basic Finance*	*3 S.H.*
BSAD	*3500*	*Business Law I*	*3 S.H.*
BSAD	*3710*	*Systems Analysis Methods*	*3 S.H.*
BSAD	*4700*	*Structured Systems Analysis and Design*	*3 S.H.*
Select One:			
BSAD	*4720*	*DataBase Management Systems* **or**	*3 S.H.*
CSC	*4500*	*DataBase Design*	*3 S.H.*
		Electives in any area to bring total to minimum of 120 semester hours.	
		Total for Degree	***120 S.H.***

BA/BS in General Studies

Program Objectives

The Bachelor of Science and Bachelor of Arts in General Studies degrees provide for individually-designed, interdisciplinary majors, which allow students to work with faculty advisors to develop a plan of study that responds to individual educational and professional goals. The programs are particularly well-suited to adult learners, because they provide the opportunity for part-time, individually-paced education which allows students to build their academic confidence and integrate their studies into their lives.

Admission Standards and Criteria

There is a formal application procedure for students who choose to major in General Studies. However, before the application is submitted to the General Studies Coordinator, a student must have completed at least four semesters of college level work. The purpose of the application is to:

- Set forth the student's academic and professional goals and demonstrate why they are best achieved through the General Studies Program
- Require students to outline their proposed program
- Stipulate any required independent exercise or internship
- Provide college-level courses and grades

The General Studies Coordinator along with the General Studies Committee reviews the application with the student and, if approved, finalize the plan of study. The student's advisor is chosen and will be responsible for filing a copy of the student's program with the Registrar. Any subsequent changes in the student's program must be approved by the student's General Studies Committee.

Breakdown of Requirements for Major

- A minimum of 36 semester hours of course work within the major
- A minimum of 9 semester hours in each of three fields of study (defined by disciplines, not department or tracks)
- A minimum of 6 semester hours of intermediate or advanced level course work in each of the three fields of study
- A maximum of 9 semester hours of general education course work, which can be counted toward the major (1 course per general education area or Liberal Arts and Sciences cluster, if applicable)
- A senior-year "Capstone" course intended to help students to integrate the various fields of study
  This may take the form of an independent study or an internship (3-15 semester hours)
- A minimum 30 semester hours of course work completed after the program of study is approved and filed with the registrar

A student's program must meet the approval of their General Studies' advisor and advisors from each of the chosen fields of study.

Program of Study

The General Studies degree is typically awarded as a Bachelor of Science. A Bachelor of Arts is awarded if the student includes foreign language study through the second year of college level work and concentrates his/her field of studies in the Liberal Arts and Sciences fields.

There are many possible combinations of course work available through this major, limited only by the breadth of courses offered through the day and evening divisions of the college. When creating a plan of study, a student must have a rationale for a thematic approach to their program. Students must meet the following requirements for the major:

Liberal Arts and Sciences Requirements (may go up to 63, depending upon whether science courses taken are 3 or 4 S.H.)	*60 S.H.*
Major Required Courses (three or four fields of study)	*36 S.H.*
Capstone Course, Project, ***or*** *Internship in Major*	*3-15 S.H.*
Electives (may be fewer depending upon credits taken in above two categories.)	*21 S.H.*
Total for Degree	***120 S.H.***

BS in Occupational/Vocational Education

Program Objectives

The college's undergraduate Occupational Education Degree program provides students with a blend of academic, vocational technical teaching, and elective learning opportunities. The program is committed to educating participants in comprehensive personnel development, which responds to specific occupational updating, professional growth and enhancement, and state-of-the-art information sharing for and with vocational technical educators. The program advocates a teaching approach, which brings about desired changes in the knowledge, skills, attitudes, and appreciation level of those in training.

Program of Study

The Occupational/Vocational Education degree is a Bachelor of Science Degree. A significant component of the program is the availability to students at off-campus vocational technical school sites located across the Central Massachusetts.

Job relevance and valid, reliable, vocational technical practice is attained through participatory planning and affiliation with industry, vocational technical school practitioners, professional associations, and representatives of the college.

The program offers up to twelve credits in recognition of the extensive life experiences of the participating students. Candidates may apply for the trade experience credit after completing eighty credits in the program.

Principal Sites where the Program is Offered

North
- Greater Lowell Regional Vocational Technical High School

Central
- Assabet Valley Regional Vocational High School
- Montachusett Regional Vocational Technical High School

South
- Bristol-Plymouth Regional Vocational High School
- Diman Regional Vocational Technical High School
- Greater New Bedford Regional Vocational High School

General Education or Liberal Arts and Sciences Requirements

ENGL	*1100*	*Writing I*	*3 S.H.*
ENGL	*1200*	*Writing II*	*3 S.H.*
SPCH	*1000*	*Introduction to Speech Communications*	*3 S.H.*
PHIL	*2000*	*Philosophy of Education*	*3 S.H.*
		Additional Liberal Arts and Sciences Requirements	*48 S.H.*
		Subtotal	***60 S.H.***

Vocational Education Requirements

OCED	*5515*	*Teaching Methods: Instructional Strategies in Vocational Technical Education*	*3 S.H.*
OCED	*5516*	*Teaching Methods: Educating the Vocational Technical Learner*	*3 S.H.*
OCED	*5517*	*Fundamentals of Vocational Technical Education*	*3 S.H.*
OCED	*5518*	*Management of the Vocational Technical Education Environment*	*3 S.H.*
OCED	*5523*	*Students with Special Needs in Vocational Technical Education*	*3 S.H.*
OCED	*5529*	*Competency Based Vocational Technical Curriculum Development*	*3 S.H.*
OCED	*5539*	*Implementing a Competency Based Curriculum*	*3 S.H.*
OCED	*5545*	*Computerized Vocational Technical Curriculum Management*	*3 S.H.*
OCED	*5549*	*Assessment Standards and Evaluation*	*3 S.H.*
OCED	*5547*	*Brain Compatibility: Teaching and Learning*	*3 S.H.*
OCED	*5546*	*Integrated Vocational Technical and Academic Curriculum*	*3 S.H.*
OCED	*5534*	*Supervised Practicum in Vocational Education*	*3 S.H.*
		Requirements Subtotal	*36 S.H.*
		**Trade Experience*	*0-12 S.H.*
		**Free Electives*	*0-24 S.H.*
		Total for Degree	***120 S.H.***

** A total of 24 semester hours is required between trade experience and free electives.*

Minor in English

Program Objectives

The minor in English allows students of other disciplines to add a concentration in literature to their plan of study. The minor provides a wide range of courses in literature that enhance a student's critical thinking and appreciation for the masters of the written word.

Program of Study

The Literature Concentration requires 18 semester hours of study. The following courses, offered in the evening and during summer sessions, satisfy the requirements as approved by the English Department:

Six hours selected from:

ENGL	*2000*	*American Literature I*	*3 S.H.*
ENGL	*2100*	*American Literature II*	*3 S.H.*
ENGL	*2400*	*World Literature I*	*3 S.H.*
ENGL	*2500*	*World Literature II*	*3 S.H.*

Twelve additional hours in electives selected from the remainder of the above and/or the following:

ENGL	*1999*	*Approaches to English Studies*	*3 S.H.*
ENGL	*2300*	*Literature and Disability*	*3 S.H.*
ENGL	*2620*	*Classical Mythology*	*3 S.H.*
ENGL	*2700*	*The Short Story*	*3 S.H.*
ENGL	*2900*	*Children's Literature*	*3 S.H.*
ENGL	*3020*	*Modern Drama*	*3 S.H.*
ENGL	*3210*	*Major American Authors of 20th Century*	*3 S.H.*
ENGL	*3220*	*American Novel to 1950*	*3 S.H.*
ENGL	*4140*	*Modern Poetry*	*3 S.H.*
ENGL	*4260*	*Journalist to Novelist*	*3 S.H.*
ENGL	*5000*	*Topics: Detective Fiction*	*3 S.H.*
ENGL	*5503*	*Dickens*	*3 S.H.*
ENGL	*5520*	*Irish Literature* ***or*** *Other English electives as approved by the English Department*	*3 S.H.*
		Total for English Minor	***18 S.H.***

Minor in Psychology

Program Objective

The minor in Psychology is particularly useful for students who wish to complement their chosen major with psychology courses relevant to their area of study, as well as for students who wish to gain a general knowledge of Psychology for application to their own lives..

Program of Study

The minor is designed to enable the student:

- To understand and evaluate psychological research and literature
- To choose courses which complement and relate to the major field of study
- To explore a particular interest in Psychology in depth

Accordingly, the following course organization is required:

Group I

Two courses are required:

PSY	*1100*	*General Psychology*	
		(prerequisite not counted towards minor)	
PSY	*2110*	*Introduction to Research Methods*	

Group II

At least one course is to be taken from **each** of any three of the four areas (Adaptive, Applied Studies, Basic Processes, and Developmental) described under the psychology major described in the section titled "Undergraduate Day Programs."

The remaining required course may be selected from either the integrative courses (Group III) or any one of the above mentioned areas. Courses may also include:

PSY	*2200*	*Human Growth and Development*	
PSY	*2750*	*Tests and Measurements*	
		Total for Psychology Minor	***18 S.H.***

Certificate Programs in Business

Certificate in Business

This Certificate in Business allows students with or without a college degree to learn the fundamentals of Business Administration. The credit earned for the certificate can be applied to an undergraduate degree in Business or can serve as prerequisites for an MBA or Management Science Program.

Requirements

BSAD	*2010*	*Introduction to Financial Reporting*	*3 S.H.*
BSAD	*2020*	*Introduction to Managerial Accounting*	*3 S.H.*
BSAD	*3200*	*Principles of Management*	*3 S.H.*
BSAD	*3300*	*Fundamentals of Marketing*	*3 S.H.*
BSAD	*3400*	*Basic Finance*	*3 S.H.*
BSAD	*3500*	*Business Law I*	*3 S.H.*
		Total for Certificate	***18 S.H.***

- At least three of the six courses must be completed at Fitchburg State College, including the last two courses
- Students must maintain a cumulative Grade Point Average of 2.0 or better

Human Resources Management Certificate

This certificate covers several disciplines, including Management, Psychology, and Business Law to give students a well-rounded and applicable Human Resources background.

Requirements

BSAD	*3200*	*Principles of Management*	*3 S.H.*
BSAD	*3210*	*Human Resources Management*	*3 S.H.*
PSY	*1100*	*General Psychology*	*3 S.H.*
PSY	*2650*	*Personnel Psychology*	*3 S.H.*
PSY	*2640*	*Performance Appraisal and Development*	*3 S.H.*
Choose one from the two listed below:			
**BSAD*	*4200*	*Organizational Behavior and Theory*	*3 S.H.*
PSY	*2610*	*Organizational Psychology*	*3 S.H.*
		Subtotal Required Courses	*18 S.H.*
Choose two from the following:			
BSAD	*3500*	*Business Law I*	*3 S.H.*
BSAD	*4630*	*Labor and Management Relations*	*3 S.H.*
BSAD	*4640*	*Labor Law I*	*3 S.H.*
BSAD	*5000*	*Topics: Compensation*	*3 S.H.*
PSY	*2570*	*Small Group Leadership*	*3 S.H.*
PSY	*2620*	*Work and the Individual*	*3 S.H.*
		Subtotal from electives (from above)	*6 S.H.*
		Total for Certificate	***24 S.H.***

**Prerequisites: Principles of Management, Fundamentals of Marketing, Business Law I, General Psychology.*

- At least five of the eight courses must be completed at Fitchburg State College, including the last two courses
- Students must maintain a cumulative Grade Point Average of 2.0 or better

Office Administration Certificate

There are two phases of course work to attain the Certificate of Office Administration. Phase I can be completed independently of Phase II, but Phase II requires completion of Phase I.

Phase I

Requirements

CSC	*1050*	*Internet Communications*	*3 S.H.*
CSC	*1100*	*Computer Applications Programming I*	*3 S.H.*
CSC	*1200*	*Introduction to Microsoft Windows and Word Processing*	*3 S.H.*
BSAD	*3200*	*Principles of Management*	*3 S.H.*
BSAD	*2010*	*Introduction to Financial Reporting*	*3 S.H.*
ENGL	*1100*	*Writing I*	*3 S.H.*
		Subtotal Phase I	*18 S.H.*

Phase II

Requirements

CSC	*1300*	*Introduction to Spreadsheets and Databases*	*3 S.H.*
BSAD	*2020*	*Introduction to Managerial Accounting*	*3 S.H.*
BSAD	*3210*	*Human Resources Management*	*3 S.H.*
BSAD	*3500*	*Business Law I*	*3 S.H.*
		Subtotal Phase II	*12 S.H.*
		Total for Certificate	***30 S.H.***

- At least eight of the ten courses must be completed at Fitchburg State College, including the last two courses
- Students must maintain a cumulative GPA of 2.0 or better

Certificate Programs in Computer Science

Computer Software Certificates

Certificate programs offer courses in personal computer operating systems and application programming. Each program is designed for those who work with personal computers in their daily lives either at home or at their workplace. In order to earn a certificate, students must maintain a cumulative average of 3.0 or better.

Computer Use and Applications Certificate

CSC	*1050*	*Internet Communications*	*3 S.H.*
CSC	*1100*	*Computer Applications Programming I*	*3 S.H.*
CSC	*1200*	*Introduction to Microsoft Windows and Word Processing*	*3 S.H.*
CSC	*1300*	*Introduction to Spreadsheets and Databases*	*3 S.H.*
		Total for Certificate	***12 S.H.***

Web Development Certificate

CSC	*1050*	*Internet Communications*	*3 S.H.*
CSC	*1150*	*Basics of Web Design*	*3 S.H.*
CSC	*2150*	*Advanced Web Design with Scripting*	*3 S.H.*
		Total for Certificate	***9 S.H.***

Programming in High Level Languages Certificate

CSC	*1500*	*Computer Science I*	*3 S.H.*
CSC	*1550*	*Computer Science II*	*3 S.H.*
CSC	*2500*	*Assembly Language Programming*	*3 S.H.*
CSC	*2560*	*Systems Programming*	*3 S.H.*
		Total for Certificate	***12 S.H.***

Programming Languages: COBOL Certificate

CSC	*1500*	*Computer Science I*	*3 S.H.*
CSC	*1550*	*Computer Science II*	*3 S.H.*
CSC	*2700*	*COBOL I*	*3 S.H.*
CSC	*2750*	*COBOL II*	*3 S.H.*
		Total for Certificate	***12 S.H.***

Computer Hardware Certificate

Students who have a high school diploma and working knowledge of high school algebra are eligible to enroll in a sequence of courses leading to a certificate in computer hardware. In order to earn that certificate, students must maintain a cumulative average of 3.0 or better.

CSC	*1600*	*Introduction to Electronics*	*4 S.H.*
CSC	*1650*	*Digital Electronics*	*4 S.H.*
CSC	*2500*	*Assembly Language Programming*	*3 S.H.*
CSC	*2600*	*Computer Organization*	*4 S.H.*
CSC	*3600*	*Microprocessors*	*4 S.H.*
		Total for Certificate	***19 S.H.***

Certificate Program in Plastics Technology

In cooperation with NYPRO, Inc., the college offers a certificate program in Plastics Technology. Located in Clinton, MA, NYPRO is a world-class leader in injection molding. The program is open both to NYPRO employees and to any other student desiring to learn about injection molding and the manufacturing process involving conversion of raw material into finished parts and products. Course instructors, approved by Fitchburg State College, have extensive backgrounds in the industry.

Requirements

Many of the program courses include a laboratory component wherein students utilize the actual stock in trade machines employed in the industry.

The courses are held in the evenings each fall and spring semester in the modern classroom facilities of the NYPRO Institute in Clinton, MA. Students must maintain a cumulative GPA of 2.0 in order to earn the certificate.

Required Courses

PLAS	*5501*	*Statistical Process Control*	*3 S.H.*
PLAS	*5502*	*Injection Molding*	*3 S.H.*
PLAS	*5503*	*Industrial Electrical Maintenance*	*3 S.H.*
PLAS	*5504*	*Mold Design*	*3 S.H.*
PLAS	*5505*	*Principles of Supervision*	*3 S.H.*
PLAS	*5506*	*Blueprint Reading*	*3 S.H.*
PLAS	*5507*	*Polymeric Materials, Design and Application*	*3 S.H.*
PLAS	*5508*	*Hydraulics/Pneumatics*	*3 S.H.*
		Total for Certificate	***24 S.H.***

Approval Programs

Vocational Technical Teacher Approval Program

Candidates seeking credentials as approved vocational technical instructors must successfully complete a thirty-six semester hour competency based training program. This training program provides the candidate with the curriculum, organizational and delivery skills, along with the methodological and pedagogical competencies needed to become an effective vocational technical instructor or pursue a baccalaureate program.

Part I

OCED	*5529*	*Competency Based Vocational Technical Curriculum Development*	*3 S.H.*
OCED	*5539*	*Implementing a Competency Based Curriculum*	*3 S.H.*
OCED	*5515*	*Teaching Methods: Instructional Strategies in Vocational Technical Education*	*3 S.H.*
OCED	*5516*	*Teaching Methods: Educating the Vocational Technical Learner*	*3 S.H.*
OCED	*5523*	*Students with Special Needs in Vocational Technical Education*	*3 S.H.*
OCED	*5518*	*Management of Vocational Technical Education Environment*	*3 S.H.*
OCED	*5547*	*Brain Compatibility: Teaching and Learning*	*3 S.H.*
OCED	*5534*	*Supervised Practicum*	*3 S.H.*
		Subtotal Part I	*24 S.H.*

Part II

OCED	*5517*	*Fundamentals of Vocational Technical Education*	*3 S.H.*
OCED	*5545*	*Computerized Vocational Technical Curriculum Management*	*3 S.H.*
OCED	*5549*	*Assessment Standards and Evaluation*	*3 S.H.*
OCED	*5546*	*Integrated Vocational Technical and Academic Curriculum*	*3 S.H.*
		Subtotal Part II	*12 S.H.*
		Total for Program	***36 S.H.***

Undergraduate Course Descriptions

African-American Studies

Key to Course Offerings

Q: designates courses in the Quantitative Scientific Cluster
I: the Ideas and Events Cluster
B: the Human Behavior Cluster
L: the Literature, Language and Arts Cluster
C: Multicultural
IDIS: Interdisciplinary courses
Multicultural and interdisciplinary courses also fulfill a cluster designation.
* Asterisk indicates that the course may be offered less than once every two years.
▲ Undergraduate Day School
● Undergraduate Evening School

Introduction to African-American Studies

This introductory course defines the origins and scope of African-American studies. It provides a survey of the social, economic, religious, and cultural expressions of African-Americans as they followed the tangled path from Africa through slavery, emancipation into the 20th century.

African-American History

(See HIST 2300) I, C

Modern African History

(See HIST 2930) I, C

History of African-American Women

(See HIST 2520) I, L, C, IDIS

20th Century African-American Literature

(See ENGL 2670) L, C

Other Voices

(See ENGL 2650) L, C

Peoples and Cultures of Africa

(See SOC 2510) B, C

History of Jazz

(See MUSC 3800) L, C

Afro Jazz Dance

(See PHED 1310)

Independent Study in African-American Studies

AAST 4900

Topics in African-American Studies

AAST 5000

Art

Key to Course Offerings

Q: designates courses in the Quantitative Scientific Cluster
I: the Ideas and Events Cluster
B: the Human Behavior Cluster
L: the Literature, Language and Arts Cluster
C: Multicultural
IDIS: Interdisciplinary courses
Multicultural and interdisciplinary courses also fulfill a cluster designation.
* Asterisk indicates that the course may be offered less than once every two years.
▲ Undergraduate Day School
● Undergraduate Evening School

Art Appreciation

ART 1100 ***3 cr. 3 hr.*** ▲ ●

The course presents a condensed survey of art history from prehistoric art to the present emphasizing the historical relationship of style and content. The Greek, Roman, Renaissance, Impressionist, and Modern art periods are emphasized. Women artists featured are Artemisia Gentileschi, Elizabeth Vigee-Lebrun, Mary Cassatt, Berthe Morisot, Georgia O'Keeffe, Elizabeth Murray, and many others. Minority artists included in the survey are Henry Ossawa Tanner, Diego Rivera, Jacob Lawrence, Romare Bearden, Martin Puryear, and many others. L, C

Survey of Art Forms I

ART 1150 ***3 cr. 3 hr.*** ▲

A study of architecture, sculpture, and painting from ancient Egyptian times to the Renaissance in Europe. Asian and other non-western or ethnographic cultures may be included. Emphasis is placed on understanding style in these various art forms. L, C

Survey of Art Forms II

ART 1160 ***3 cr. 3 hr.*** ▲

This survey of significant styles in the architecture and painting of the Western World depicts art from the year 1400 to the present with emphasis upon the special nature of the visual experience. L, C

Drawing

ART 1400 ***3 cr. 6 hr.*** ▲ ●

A studio course that introduces students to the practice of drawing with emphasis on the description of form through means of line, shade, and perspective. An investigation of a variety of media as well as of basic stylistic alternatives is encouraged. L, C

Introductory Painting

ART 1450 ***3 cr. 6 hr.*** ▲

The course studies the basic problems of form, color, and texture as understood in oil paintings. Consideration is also given to the nature and use of the oil painting materials themselves. L

Design

ART 1600 ***3 cr. 3 hr.*** ▲

In this course the basic elements of design are applied to the creation of two-dimensional form. Studio work explores the effect of black and white, color, and mixed media on form. L

Three-Dimensional Design

ART 1650 ***3 cr. 3 hr.*** ▲

This course explores three-dimensional design concepts as they have been applied historically. Topics covered include form, space, structure, scale, line, and color. Lectures, slides, film, and visual presentations are included in the course program. L

Contemporary Art

ART 1720 ***3 cr. 3 hr.*** ▲

The course presents a study of recent and contemporary trends in American and international art from 1945 to the present. The course consists of active student participation in slide discussions and museum trips. L, C

Sculpture I

ART 1840 ***3 cr. 6 hr.*** ▲

This introductory studio course encourages students to explore their ideas and to transform them into sculpture. Students combine creativity, exciting materials, and basic sculpture techniques to create unique works of art. L

Life Drawing

ART 2200 ***3 cr. 6 hr.*** ▲

The basic problems in form and anatomy are studied while drawing from the nude and costumed model. Various techniques and tools are explored, including a study of some of the great masters' drawings.

Intermediate Drawing

ART 2250 ***3 cr. 6 hr.*** ▲ ●

The course is an advanced study of pictorial technique in dry media, including but not limited to charcoal, pencil, conte, and pastel. Emphasis is placed on the developing of a student's own style through a variety of subjects and media. L

Prerequisite: ART 1400.

American Art

ART 2300 ***3 cr. 3 hr.*** ▲

The course is a survey of significant stylistic developments in visual arts from the earliest colonial times to the present. L

Sculpture II

****ART 2400*** ***3 cr. 6 hr.*** ▲

This advanced studio course is an expansion upon the basic principles of sculpture. Sculpture projects are geared toward the individual interests and requirements of the advanced student. L

Prerequisite: ART 1840.

Water-Based Media

ART 2450 ***3 cr. 4 hr.*** ▲ ●

The course explores the principles, materials, techniques, and history of transparent watercolor. This course deals primarily with transparent watercolors, but opaque aqueous media is touched upon. Basic knowledge and skills are developed so that the student may acquire rudiments for visual expression through this media. Although Basic Drawing is desirable, it is not required. L

Art of the Renaissance

ART 2550 ***3 cr. 3 hr.*** ▲

The course studies the development of painting, sculpture, and architecture in Italy from 1250 to 1550, the age of Michelangelo, and the Northern Europe Renaissance from 1400 to 1600. L

Advanced Painting

****ART 2600*** ***3 cr. 6 hr.*** ▲

The course provides an advanced study of pictorial techniques with an emphasis on personal expression in oil, acrylic, or water based media. The class may be repeated for credit. L

Prerequisite: ART 1450 or 2450.

Women, Art, and Society

ART 3700 ***3 cr. 3 hr.*** ▲ ●

This course introduces the student to the place and roles of women in the world of visual and fine arts from the middle ages to the present. L, C

Nineteenth Century Art

ART 2900 ***3 cr. 3 hr.*** ▲

This survey is comprised of art from French Neo-Classicism through Post-Impressionism, including the movements of Romanticism, Realism, and Impressionism. Emphasis is placed on French, British, and German art, with pertinent comparisons to American, Japanese, African, and ethnographic art. Students study women and minority artists including Berthe Morisot, Mary Cassatt, Rosa Bonheur, Suzanne Valadon, Henry Osawa Tanner, and others. L

Art Criticism

ART 3100 ***3 cr. 3 hr.*** ▲

The course is a study of the development of modern art criticism. The course begins by examining traditional art criticism as established by Panofsky, Woefflin, and others. It then concentrates on contemporary art and criticism, commencing with Clement Greenberg in the 1940s and concluding with Postmodern criticism of the 1980s and 1990s. L, IDIS

Prerequisite: one Art History course or Music 2000.

Early Twentieth Century Art

ART 3150 ***3 cr. 3 hr.*** ▲

The course is a survey of multicultural art from 1890 to 1945 in Europe and the United States. Periods covered include French Post Impressionism, Fauvism, and Cubism; German Expressionism; Spanish and French Surrealism; Early American Modernism, the Harlem Renaissance, and Regionalism. Students study women and minority artists including Suzanne Valadon, Kathe Kollwitz, Gabriel Munter, Frida Kahlo, Emily Carr, Georgia O'Keefe, Henry Ossawa Tanner, Jacob Lawrence, Romare Bearden, Horace Pippin, Bob Thompson, Diego Rivera, and others. L, C

History of Architecture

ART 3300 ***3 cr. 3 hr.*** ▲

This course presents a condensed survey of architectural history from ancient art to the present. Periods studied include Greek, Roman, Romanesque, Gothic, Renaissance, and Baroque architecture. Non-Western architecture includes the culture of Japan, Pre-Columbian Mexico, India, and Islam. I, L, IDIS, C

History of Modern Architecture

ART 3500 ***3 cr. 3 hr.***

A study of architecture of the nineteenth and twentieth centuries. Periods begin with the classical and federal works of Thomas Jefferson, continue through the various revivals of the nineteenth century, include Art Nouveau and the Chicago School, and conclude with the modern skyscrapers and post-modern architecture. Some concentration will be placed upon the works of Richardson, Sullivan, and Frank Lloyd Wright. L, IDIS

Independent Study in Art

ART 4901 ***1 cr. 1 hr.*** ▲ ●

Independent Study in Art

ART 4902 ***2 cr. 2 hr.*** ▲ ●

Independent Study in Art

ART 4903 ***3 cr. 3 hr.*** ▲ ●

The independent study is for selected students who have approval of both the department head and their advising Instructor.

Museum Internship

****ART 4950*** ***3 cr. 6 hr.*** ▲

In conjunction with Fitchburg State College, the Fitchburg Art Museum offers a multifaceted learning experience coupled with practical application conducted in the Fitchburg Art Museum and in elementary school classrooms of Fitchburg and surrounding towns. Student Instructors are trained to give instructional lectures about the ancient cultures of Egypt, Mesopotamia, and Mesa Verde, to school children both in the Museum galleries and in the classroom.

Topics in Art

ART 5000 ***3 cr. 3 hr.*** ▲ ●

Courses having a more narrow focus or those taught on an irregular basis may be offered under the "Topics" heading. New courses may also be taught on an experimental basis under this title.

Biology

Key to Course Offerings

Q: designates courses in the Quantitative Scientific Cluster

I: the Ideas and Events Cluster

B: the Human Behavior Cluster

L: the Literature, Language and Arts Cluster

C: Multicultural

IDIS: Interdisciplinary courses

Multicultural and interdisciplinary coarses also fulfill a cluster designation.

* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

Introduction to Life Science I

BIOL 1000 ***3 cr. 4 hr.*** ▲ ●

Offered in the fall semester for day students.

The course focuses on the history, philosophy, and content of biology as a science. Laboratory work includes experiences that emphasize problem solving by the student. Q

Introduction to Life Science II

BIOL 1100 ***3 cr. 4 hr.*** ▲ ●

Offered in the spring semester for day students.

Continuation of BIOL 1000. Q

Anatomy and Physiology I

BIOL 1200 ***3 cr. 4 hr.*** ▲ ●

Offered in the fall semester for day students.

The course explores the structure and function of the human organism on the cellular, tissue, organ, and system levels. Cellular metabolism, histology, and the following systems: skeletal, muscular, and nervous (including the special senses) are examined. The laboratory emphasizes both physiology and the dissection of preserved mammalian specimens. (Not open to students who have completed BIOL 1700, Human Biology or BIOL 2420, Human Physiology.) Q

Anatomy and Physiology II

BIOL 1300 ***3 cr. 4 hr.*** ▲ ●

Offered in the spring semester for day students.

This course is a continuation of BIOL 1200. The following systems are covered: circulatory, respiratory, digestive, excretory, endocrine, and reproductive. (Not open to students who have completed BIOL 1700, Human Biology or BIOL 2420, Human Physiology.) Q

Adaptations

BIOL 1350 ***3 cr. 3 hr.*** ▲

The human organism is examined in terms of its adaptation to acute and chronic stress. Physiological responses to such stressors as exercise, heat, darkness, altitude, and nutrition are studied theoretically and in a laboratory setting. Q, IDIS

General Botany

****BIOL 1400*** ***3 cr. 4 hr.*** ▲ ●

The course focuses on the structure, physiology, and life cycles of algae, fungi, bryophytes, ferns, gymnosperms, and angiosperms. The relationship of plant biology to agriculture and medicine is also discussed. The laboratory involves the study of live and preserved plant materials, simple physiological experiments, and a plant growth project. The class is not open for majors or minors in Biology. Q

Seminar in Modern Biology

****BIOL 1500*** ***1 cr. 1 hr.*** ▲

The seminar evolves around the discussion of current topics in basic and applied biological research based on readings of original scientific reports. Each student is expected to prepare one brief presentation on a topic of his or her choice.

Nutrition

BIOL 1650 ***3 cr. 3 hr.*** ▲ ●

The course involves an examination of nutrients in foods and their metabolic role in normal nutrition. Emphasis is on energy sources and utilization, vitamins and minerals, nutritional requirements in relation to the changing demands of life, and the effect of food handling and processing on the nutrient content of food. Course material is facilitated by lectures, discussions, and personal nutrition projects. Q

Human Biology

BIOL 1700 ***3 cr. 3 hr.*** ▲

Students learn the anatomy and physiology of the cells, tissues, organs, and organ systems of the human organism as well as their functional inter-relationships. (The class is not open to students who have completed BIOL 1200, 1300.) Q

General Biology I

BIOL 1800 ***4 cr. 6 hr.*** ▲ ●

Offered in the fall semester for day students.

The following topics are examined during the first semester: Cellular Biology, Information and Heredity, and Evolution. The second semester covers: Biological Diversity, Human Physiology, and Ecology. Laboratories emphasize hypothesis formation and testing as well as data gathering and analysis. Q

Science in Elementary Education

****BIOL 1810*** ***3 cr. 3 hr.*** ▲

Methods for teaching Science in the elementary school are explored and examined. The class is recommended only for Elementary Teaching majors.

General Biology II

BIOL 1900 ***4 cr. 6 hr.*** ▲ ●

Offered in the spring semester for day students.

The class is a continuation of BIOL 1800. Q

Biology of Drugs

BIOL 2000 ***3 cr. 3 hr.*** ▲

A study of the biological effects of drugs at the cellular level. Emphasis is placed on the more popular psychoactive drugs.

Prerequisite: one year of Biology, Chemistry, or permission of Instructor.

Introductory Ecology

BIOL 2300 ***3 cr. 4 hr.*** ▲

Offered in the fall and spring semesters for day students.

The course is a survey of major ecological concepts and methodology as a basis for further investigations of the dynamic relationship between organisms and their environment. Field and laboratory work emphasize problem identification, formulation of hypotheses, data collection, and analysis and interpretation of results in terms of their biological implications.

Prerequisite: BIOL 1000, or 1100, or 1800, or 1900 or permission of Instructor.

Environmental Health

****BIOL 2400*** ***3 cr. 3 hr.*** ▲

Students conduct investigations into public health with emphasis on forms of life, chemical substances, environmental conditions, and other environmental forces that exert an influence on human health and well-being.

Prerequisite: BIOL 1100 or equivalent or permission of Instructor.

Human Physiology

BIOL 2420 ***3 cr. 3 hr.*** ▲

This course is an intensive study of the functional operation of human organ systems and the interrelationships of these systems. (Intended for students who are majoring in Biology or Clinical Lab Science.) Q

Histology

***BIOL 2500** **3 cr. 4 hr.** ▲

The course starts with a systematic survey of basic animal cell and tissue types, followed by in-depth microscopic study of the major organ systems. Practical work includes histological microtechnique on normal and pathological specimens.
Prerequisites: BIOL 1800 or BIOL 2420 or BIOL 1200, 1300.

Social Biology

***BIOL 2550** **3 cr. 3 hr.** ▲

The course explores the biological and cultural evolution of man and how that evolution has developed or caused specific societal problems. A study of the biological explanations for and possible solutions to these problems is conducted.
Prerequisite: 6 semester hours of Introductory Biology or equivalent.

Survey of Micro-organisms

BIOL 2700 **3 cr. 4 hr.** ▲

Offered in the spring semester for day students 3 hrs. lecture, 2 hrs. lab per week plus some additional time.

The course serves as an introduction to the biology of major groups of micro-organisms including bacteria, viruses, protozoa, and fungi. Emphasis is placed on their role in nature and their relationship to man as agents of infectious diseases. In the laboratory principles and practices of aseptic techniques and diagnostic identification and culture of disease entities are explored.
Prerequisites: BIOL 1300 and Introductory Chemistry or permission of Instructor.

Genetics

BIOL 2800 **3 cr. 4 hr.** ▲ ●

Offered in the fall and spring semester for day students.

Basic principles of biological information processing are examined including Mendelian inheritance, sex determination, chromosome cytogenetics, linkage, recombination and genetic mapping, mutagenesis, molecular genetics and gene-enzyme relationships, and quantitative inheritance. Laboratory work includes study of mutational effects and recombinational analysis in maize, Drosophila, bacteria, and viruses.
Prerequisite: 3 semester hours of Introductory Biology or equivalent.

Introduction to Secondary Teaching

BIOL 2860 **3 cr. 3 hr.** ▲

This course is required of all students entering a provisional certification program at the secondary level. It is a sophomore level course for full-time undergraduates and the first course taken by transfer and certification-only students. Its purpose is to provide a field experience for students intending to enter teacher preparation, so they can determine whether their decision is a plausible goal. The experience also exposes students to the range of challenges and problems in the contemporary secondary school. This course includes a pre-practicum requirement.

Marine Biology

***BIOL 2900** **3 cr. 4 hr.** ▲

Offered in the fall semester for day students.

In this course students investigate the distribution of the dominant animals and plants in a salt marsh, sand beach, tide pool, and rocky intertidal area. Data on physical and chemical factors of these habitats is correlated with the composition, behavior, and physiology of the flora and fauna of each habitat.
Prerequisites: BIOL 1800, 1900 or permission of Instructor.

Parasitology

***BIOL 3000** **3 cr. 4 hr.** ▲

The morphology and diagnostic identification of representative groups of parasitic protozoa, helminths, and arthropods are studied along with their functional life cycles and pathogenic relationships to animal and human hosts. Emphasis is placed on epidemiology, pathology, control, and treatment of important parasitic diseases.
Prerequisite: BIOL 1900.

Ornithology

***BIOL 3100** **3 cr. 4 hr.** ▲

Field trips, 2 hrs. lecture, 2 hrs. lab per week.
Offered: spring semester.

The course makes an inquiry into the life of birds. Emphasis is on correlation of structure, function, and behavior. Laboratory studies are conducted of external characters, anatomy, and criteria for identification.
Prerequisites: BIOL 1100, or BIOL 1900, or permission of Instructor.

Ichthyology

***BIOL 3150** **3 cr. 4 hr.** ▲

Offered in the fall semester for day students.

The course provides a study of the classification, ecology, and physiology of the fish common to Massachusetts. Both marine and freshwater species are covered and field collecting trips planned. Class time is divided between lecture and laboratory work.
Prerequisites: BIOL 1900 and BIOL 2300, or permission of Instructor.

Plant Physiology

***BIOL 3200** **3 cr. 4 hr.** ▲

Offered in the fall semester for day students.

Individually paced instruction is offered to study the integration of plant structure and function, emphasizing physiology of the integrated plant-water relations, transpiration and translocation, mineral nutrition, photosynthesis, respiration, growth hormones, differentiation, and morphogenesis.
Prerequisite: BIOL 1900 or BIOL 1400.

Cell Biology

BIOL 3250 **3 cr. 4 hr.** ▲

Offered in the fall semester for day students.

Cell and subcellular structure and function are covered in this course. Membranes, cell organelles, bioenergetics, photosynthesis, DNA and RNA structure, function and replication, protein synthesis, and gene regulation are the major areas considered. Laboratory includes absorption spectrophotometry, cell fractionation, organelle isolation, DNA isolation, and electrophoresis.
Prerequisites: BIOL 2800 and CHEM 2100 or permission of Instructor.

Entomology

***BIOL 3300** **3 cr. 4 hr.** ▲

Offered in the fall semester for day students.

Students learn anatomy, habits, life histories, and identification of insects and some related arthropods. Laboratory work includes preparation of a representative collection of adult and larval forms from terrestrial and aquatic environments with emphasis on techniques for identification of these forms.
Prerequisite: BIOL 1900 or permission of Instructor.

Limnology

***BIOL 3400** **3 cr. 4 hr.** ▲

Offered in the fall semester for day students.

The course offers a study of fresh waters and their inhabitants. Class work surveys protists, invertebrates, vertebrates, and plants collected from local waters and emphasizes their ecological interrelationships as determined by biological, physical, and chemical parameters.
Prerequisites: BIOL 1900 and BIOL 2300 or permission of Instructor.

Biochemistry

BIOL 3450 ***4 cr. 6 hr.*** ▲

Offered in the fall semester for day students.

The course is a study of the chemistry of biologically important molecules and macromolecules, including metabolism and regulation, water, proteins, enzymes, lipids, carbohydrates, and nucleic acids. Laboratory emphasizes manual and instrumented techniques for isolation, qualitative and quantitative analysis of macromolecules, and the kinetics and induction of enzymes.

Prerequisite: CHEM 2100 or permission of Instructor.

Plant Taxonomy

****BIOL 3500*** ***3 cr. 5 hr.*** ▲

Offered in the fall semester for day students.

The course examines the classification of higher plants in accordance with evolutionary principles and trends. Laboratory is devoted to the techniques of plant identification with emphasis on the terminology and use of botanical keys. Field trips are taken for collecting representative elements of the local flora and preparation of an herbarium.

Prerequisite: BIOL 1800 or 1900 or permission of Instructor.

Developmental Biology

BIOL 3550 ***3 cr. 4 hr.*** ▲

Offered in the spring semester for day students.

The course examines a detailed survey of developing embryos from the fertilized egg through the various stages leading to the adult organism. Current theories regarding the molecular mechanisms underlying cell differentiation and other classic developmental processes are also themes of this course. Other topics covered in the survey include regeneration, metamorphosis, aging, and cancer. Laboratory involves the study of development in live sea urchins, birds, frogs, and ferns as well as work with prepared slides.

Prerequisites: BIOL 1800, BIOL 1900, BIOL 2800, BIOL 3250, or permission of Instructor.

Biology of Algae

****BIOL 3600*** ***3 cr. 4 hr.*** ▲

Students collect and identify common algae found in the New England area. Emphasis is on freshwater forms, but some study of marine algae is conducted as well. Distribution of algal species is correlated with physical and chemical factors in their habitats. Laboratory includes a study of algal physiology and reproduction as well as techniques for cultivation.

Prerequisite: BIOL 1400 or BIOL 1900.

Mammalogy

****BIOL 3700*** ***3 cr. 4 hr.*** ▲

The course involves a study of the biology of mammals with emphasis on New England species. Laboratory work includes identification and preparation of small mammal study skins. Field trips are made to capture and study animals in the field and to visit museums for access to study collections and habitat groupings of the larger mammals unlikely to be seen in the wild.

Prerequisite: BIOL 1900 or permission of Instructor.

General Microbiology

BIOL 3900 ***4 cr. 6 hr.*** ▲

Offered in the fall semester for day students.

The structure, nutrition, and growth of bacteria is examined in this course as well as characterization of representative bacteria, fungi, viruses and protozoa. Their genetic and metabolic peculiarities, immunological techniques, and the immune response in man is studied. Laboratory work includes aseptic technique, isolation and cultivation of microbes, staining techniques and diagnostic metabolic reactions.

Prerequisites: Organic Chemistry and BIOL 2800 or permission of Instructor.

Endocrinology

****BIOL 4250*** ***3 cr. 3 hr.*** ▲

The course covers chemical integration of physiological processes by hormones and related agents. Discussions include structure and function of vertebrate and other animal endocrine systems, neuroendocrine relationships, and other topics of current interest.

Molecular Biology

****BIOL 4500*** ***4 cr. 6 hr.*** ▲

The course offers studies of restriction enzymes, plasmids, gene cloning, recombinant DNA, DNA sequencing, oncogenes, and other topics of current interest. Laboratory work includes restriction enzyme digests and mapping, gene cloning, bacterial transformation, blue/white color selection, minipreps, and PCR.

Prerequisites: BIOL 2800 and BIOL 3250 or BIOL 3450.

Evolution

****BIOL 4600*** ***3 cr. 3 hr.*** ▲

The course is an introduction to the principles and processes governing the evolution of living organisms. Emphasis is placed on the ways by which various other biological disciplines relate to evolutionary studies. A survey of paleontological evidence is given to demonstrate how evolutionary principles have affected life.

Prerequisites: BIOL 1900, 2300, and 2800 or permission of Instructor.

Neurobiology

****BIOL 4800*** ***3 cr. 3 hr.*** ▲

A survey is conducted of neural activity and the neural bases of behavior as illustrated by simpler invertebrate and vertebrate nervous systems. Topics covered in the class include structure and function of neurons, neurodevelopment, cellular basis of behavior (sensory and motor systems), neuropharmacology, and neural plasticity. The class is facilitated by lectures and demonstrations.

Prerequisites: BIOL 1200/1300, or BIOL 1800/1900 and one year of Chemistry, or permission of Instructor.

Immunology

BIOL 4810 ***3 cr. 3 hr.*** ▲

Offered in the spring semester for day students.

The course consists of a survey of immune response, antibody formation and function, immunosuppression, blood group antigens and antibody-antigen reactions. The principles of complement activity, hypersensitivity, and autoallergic reactions are discussed.

Prerequisites: BIOL 3900 and Organic Chemistry.

Biology Teaching Methods

BIOL 4850 ***3 cr. 3 hr.*** ▲

Methods and philosophical background for teaching of modern biological science are implemented in the course, which is a prerequisite for student teaching. Students who plan to student teach should consult Screening Policies for Student Teachers for other requirements that must be fulfilled prior to student teaching.

Prerequisites: junior or senior standing, EDUC 3010, PSY 2230, and permission of Instructor.

Independent Study

BIOL 4901-4903 **1 to 3 credits** ▲ ●

Offered in the fall and spring semesters for day students.

In the Independent Study participants fulfill laboratory or other independent research under the guidance and supervision of one or more faculty members. A comprehensive term paper and an oral presentation are required for successful completion of the project. Independent Study may be repeated for credit to a maximum of 9 semester hours.
Prerequisites: junior or senior standing, 15 credits of Biology and special permission of the Departmental Curriculum Committee.

Biology Practicum in a Secondary School I and II

BIOL 4860, 4870 **6 cr.** ▲

Students are assigned to cooperating schools for a semester of student teaching.

Internship

BIOL 4950, 4960 **3 or 6 cr.** ▲

Offered in the fall and spring semester for day students.

The Internship involves off-campus laboratory or field experience in conjunction with established research programs at cooperating governmental, industrial, or private facilities. Supervision is shared by program directors and faculty members at Fitchburg State College. Assignments are contingent upon students' abilities and acceptance by the cooperating institution. One or two full days of work per week may be expected. A comprehensive term paper and an oral presentation are required after each semester of Internship work for successful completion of the project. An Internship course may be repeated for up to a maximum of 12 semester hours.
Prerequisites: junior or senior standing and approval of the Biology Department.

Topics in Biology

***BIOL 5000** **3 cr. 3 hr.** ▲ ●

Courses having a more narrow focus or those taught on an irregular basis may be offered under the "Topics" heading.
Prerequisites may be required. New courses may be taught on an experimental basis under this title.

Business Administration

Key to Course Offerings

Q: designates courses in the Quantitative Scientific Cluster

I: the Ideas and Events Cluster

B: the Human Behavior Cluster

L: the Literature, Language and Arts Cluster

C: Multicultural

IDIS: Interdisciplinary courses

Multicultural and interdisciplinary courses also fulfill a cluster designation.

* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

Introduction to Computer Information Systems for Business

BSAD 1700 **3 cr. 3 hr.** ▲ ●

This course introduces the student to computer information science and its applications. The student develops literacy in the computer and its uses. The laboratory work includes an introduction to Word Processing, Spreadsheets, Databases, and the fundamentals of programming with BASIC. No previous knowledge of computers is required or presumed. Credit is not awarded for both BSAD 1700, Introduction to Computer Information Systems for Business and CSC 1100, Computer Applications. See Business Administration Department Chair for alternate course selections. Q
Prerequisite: Basic Math II.

Introduction to Financial Reporting

BSAD 2010 **3 cr. 3 hr.** ▲ ●

This course provides an overview of financial accounting/reporting in its role as an information system within the socioeconomic environment of business. Financial reporting concepts and practices are presented from a decision perspective in which the content of financial statements and the analysis, interpretation, and application of this information in making rational business decisions are examined. Relationships between business events and elements of the financial statements are analyzed. Coverage of accounting procedures is presented to the extent that they are necessary to understand the substance of financial statement information. Internal control of accounting systems will be considered. A base of analytical tools will be provided for interpretation of financial information. Specific financial accounting issues related to current and long-term operational assets, current liabilities, debt instruments, and equity are discussed.
Prerequisites: sophomore status. BSAD 1700, MATH 1250.

Introduction to Managerial Accounting

BSAD 2020 **3 cr. 3 hr.**

This course stresses the usefulness of accounting data as it relates to the managerial decision making process. Computer applications are integrated with the broad objectives relative to planning, control, and analysis. Among the multifaceted areas of study are financial statement analysis, budgeting standard cost analysis, and capital expenditure planning and control.
Prerequisites: BSAD 2010, ECON 1200, (including all related prerequisites.)

Business Problem Solving with Microcomputers

BSAD 2700 **3 cr. 3 hr.**

This course uses the computer as a tool to solve business problems. Problem definition, analysis of problem, solution design, and implementation are phases leading toward the development of a business application system.
Prerequisite: BSAD 1700.

Financial Reporting Theory and Practice I (formerly Intermediate Accounting I)

BSAD 3010 **3 cr. 3 hr.** ▲ ●

This course is designed to provide a strong conceptual, analytical, and procedural foundation for the study of financial reporting and practice. The historical development of accounting thought and the role of financial accounting in today's economy are investigated. Socioeconomic, political, legal, and ethical influences on financial reporting are considered. A discussion of the following issues: procedures to record, summarize, and report results of business events, content and presentation of financial statements; and specific reporting issues related to cash and receivable. An overview of financial statement analysis is also presented. International issues are addressed as appropriate.
Prerequisites: BSAD 2020, MATH 2200, including all related prerequisites.

Financial Reporting Theory and Practice II (formerly Intermediate Accounting I)

BSAD 3020 ***3 cr. 3 hr.*** ▲ ●

In this course, in-depth discussion of financial reporting theory and practice is continued with respect to: inventories; concurrent operational assets; current and contingent liabilities; long-term debt; and owners' equity. Financial statement analysis of these financial statement elements is also continued. Ethical and international issues are addressed throughout the semester.

Prerequisite: BSAD 3010.

Cost Accounting I

BSAD 3120 ***3 cr. 3 hr.*** ▲ ●

In this course cost accounting systems and product costing are discussed in depth. Flow of costs, job and process costing, just-in-time, activity-based costing, and cost allocation techniques, are covered.

Prerequisites: BSAD 2020, MATH 2200, including all related prerequisites.

Cost Accounting II

BSAD 3130 ***3 cr. 3 hr.*** ▲ ●

This course covers planning of profits, costs, and sales through the use of budgets, cost behavior analysis, and cash forecasts. The course introduces direct costing, standard costing, and conventional gross profit analysis. It emphasizes the uses of cost accounting data for policy making and decision making purposes through break-even analysis, capital budgeting, differential, and comparative cost analysis.

Prerequisite: BSAD 3120.

Principles of Management

BSAD 3200 ***3 cr. 3 hr.*** ▲ ●

This is an introductory course in basic management concepts and practices. This course covers principles and techniques as they relate to planning, organizing, leading, and controlling business enterprises.

Human Resources Management

BSAD 3210 ***3 cr. 3 hr.*** ▲ ●

This is an introductory course which surveys human resources practices and procedures involved with recruiting, employment, training and development, job evaluation, compensation, health and safety, labor relations, and workplace law. Special topics of student interest are also covered.

Prerequisite: BSAD 3200.

Production Management

BSAD 3220 ***3 cr. 3 hr.*** ▲ ●

This course provides an overview of business operations. In light of selected production improvement techniques (automation, incentive wage system, etc.), students review the role of selected staff departments (purchasing, production planning, etc.) that support the line organization. In the process, students become familiar with a variety of control systems (quality control, inventory control, etc.), which are fundamental in any business—whether product or service oriented.

Prerequisite: BSAD 3200.

Fundamentals of Marketing

BSAD 3300 ***3 cr. 3 hr.*** ▲ ●

This course discusses the role of marketing in our economic and social structure. It includes the planning, distribution, pricing, and promotion of goods and services to consumer and industrial markets in the context of internal activities of the firm and environmental forces.

Consumer Behavior

BSAD 3310 ***3 cr. 3 hr.*** ▲ ●

This course familiarizes the student with the consumer decision making processes. It utilizes the concepts of the social and behavioral sciences in order to provide an understanding of consumer buying behavior.

Prerequisites: BSAD 2020, 3200, 3300, 3500.

Market Research

BSAD 3320 ***3 cr. 3 hr.*** ▲ ●

This course emphasizes the importance of research in marketing planning and decision making. Instruction includes the basics of scientific investigation, the search for information, sampling, data collection, data analysis, interpretation, and reporting.

Prerequisites: BSAD 2020, 3200, 3300, 3500. MATH 1800.

Advertising

BSAD 3330 ***3 cr. 3 hr.*** ▲ ●

In this course students become knowledgeable about the preparation and use of advertising. Topics include the functions of advertising, planning an advertising campaign, copy, artwork, and media selection.

Prerequisites: BSAD 2020, 3200, 3300, 3500.

Small Business Management

BSAD 3340 ***3 cr. 3 hr.*** ▲

This course provides the students with an understanding of the unique characteristics required of the successful small business entrepreneur and the specifics relative to the start-up, financing and management of a small business. Emphasis is on a full spectrum of business functions as applied to small firms, including proprietorships, partnerships, corporations, and franchised outlets.

Prerequisites: BSAD 3200, 3300.

TQM (Total Quality Management)

BSAD 3350 ***3 cr. 3 hr.***

This course studies the concepts, practices, and methods of contemporary quality management in both manufacturing and service-related industries. Topics may include quality management, customer service, leadership, measuring quality, statistical process, and teamwork.

Prerequisite: BSAD 3200.

Basic Finance

BSAD 3400 ***3 cr. 3 hr.*** ▲ ●

This course studies the forms and sources of financing business firms, large and small, corporate and noncorporate. The emphasis is on financial planning and financial problem solving.

Prerequisite: BSAD 2020.

Investments

BSAD 3410 ***3 cr. 3 hr.*** ▲ ●

The course analyzes stocks, corporate and governmental bonds, and other investment media, and studies the secondary stock market mechanism. Students review various investment vehicles and security evolution. Research of individual companies and industries is required. The course is primarily facilitated by lectures and problem solving.

Prerequisites: BSAD 2020, 3200, 3300, 3400, 3500.

Real Estate Principles and Practices

BSAD 3440 ***3 cr. 3 hr.*** ▲ ●

Using a business perspective this course explores real estate use, ownership, and development as well as its social impact and business constraints. The effect of home ownership on executive transfers and company costs is examined. Current terminology in the field is defined, including property rights, ownership, financing, planning for the future, property evaluation, and property management.

Prerequisite: BSAD 3200.

Real Estate Investment and Management

BSAD 3460 **3 cr. 3 hr.** ▲ ●

The course looks at the business decisions involved in the investment, financing, and management of real estate. This course focuses on real estate as a popular investment vehicle because of the number of income-producing characteristics it possesses. Students learn the principles of cash flow, changing property values, equity investor, decision-making, risk and return, and market research in light of current real estate trends.

Prerequisites: BSAD 2020, 3200, 3300, 3400, 3500.

Business Law I

BSAD 3500 **3 cr. 3 hr.** ▲ ●

This course is an introduction to the study of business law, its nature and classification, the court systems, and their procedures. Contract law, the law of sales, and personal property are considered comprehensively.

Collective Bargaining Methods

***BSAD 3630** **3 cr. 3 hr.** ▲

After a discussion of strategies and tactics used in labor negotiations, this course evolves from simulated contract negotiations. It gives the student first-hand knowledge of what goes on at the bargaining table.

Prerequisites: BSAD 3200, 3210, 4610.

Labor Organization and Trade Unionism

***BSAD 3640** **3 cr. 3 hr.** ▲

This course provides the student with the knowledge of how unions are organized and operated in the nation. It includes a presentation of the development of craft and industrial unions and the anatomy of local and national labor organizations. The political and economic position of labor unions in the country today is analyzed.

Prerequisites: BSAD 2110, 3200, 3300, 3500.

Systems Analysis Methods

BSAD 3710 **3 cr. 3 hr.** ▲ ●

As an overview of the systems development life cycle, this course introduces the student to the fundamental concepts and techniques of systems analysis and design. Classical and structured methods of systems documentation are explored as well as information gathering and reporting activities. Finally, the transition from systems analysis to design is discussed.

Prerequisites: CSC 2700, CSC 2750.

Computer Concepts and Programming Techniques

BSAD 3720 **3 cr. 3 hr.** ▲

This course is a survey of technical topics related to computer systems with emphasis on the relationship between computer architecture, system software, and applications software.

Prerequisites: BSAD 3710, CSC 2700.

Financial Reporting Theory and Practice III

BSAD 4010 ▲ ●

In this course, in-depth discussion of financial reporting theory and practices continued with respect to: inventories; concurrent operational assets; current and contingent liabilities; long-term debt; and owners' equity. Financial statement analysis of these financial statement elements is also continued. Ethical and international issues are addressed throughout the semester.

Prerequisite: BSAD 3020.

Consolidations and Mergers

BSAD 4100 **3 cr. 3 hr.** ▲ ●

This course includes accounting problems involved in the preparation of consolidated financial statements and in home and branch office relationships. The accounting concepts of purchasing and pooling of interests are stressed.

Prerequisites: BSAD 3020, including all related prerequisites.

Individual Taxation

BSAD 4120 **3 cr. 3 hr.** ▲ ●

This course considers the Massachusetts and Federal Income Tax Laws, as it applies to individuals, partnerships, fiduciaries, and corporations.

Prerequisites: BSAD 4010. Financial Reporting Theory and Practice III (Including all related prerequisites).

Corporate, Estate, and Gift Taxation (formerly Advanced Taxation)

BSAD 4130 **3 cr. 3 hr.** ▲

This course studies the Federal income tax laws and regulations applicable to partnerships, corporations, and fiduciaries. Federal gift and estate taxes, reorganizations, and personal holding companies are also discussed.

Prerequisite: BSAD 4120.

Auditing

BSAD 4140 **3 cr. 3 hr.** ▲ ●

The basic concepts of auditing and control are examined in this course. It emphasizes internal control, audit problems, and professional responsibilities of the CPA to the auditing requirements.

Prerequisite: BSAD 4010.

Not For Profit Accounting

***BSAD 4160** **3 cr. 3 hr.** ▲

This course examines the accounting and reporting principles, standards, and procedures as they apply to governmental and not-for-profit entities, such as governmental organizations, hospitals, colleges, and universities.

Prerequisites: BSAD 3020, including all related prerequisites.

Organizational Behavior and Theory

BSAD 4200 **3 cr. 3 hr.** ▲ ●

This course is a general descriptive and analytical study of organizations from the behavioral science point of view. It includes problems of motivation, leadership, morale, social structure, group networks, communications, hierarchy, and control in complex organizations. The interaction between technology and human behavior is discussed. Alternative theoretical models are considered.

Prerequisites: PSY 1100, BSAD 3200, 3300, 3500.

Social and Political Environment of Business

BSAD 4210 **3 cr. 3 hr.** ▲ ●

This course is a study of the evolution of American business in the context of its changing political and social environment. Analysis of the origins of the American business creed, the concept of social responsibility of business, and the expanding role of the corporation is included.

Prerequisites: ECON 1000, BSAD 3200, 3500.

Business Fluctuations and Forecasting

BSAD 4230 **3 cr. 3 hr.** ▲ ●

This course is an analysis of the operations of our free enterprise system with emphasis on the factors responsible for economic instability. Students analyze public and business policies which are necessary as a result of business fluctuations.

Prerequisites: ECON 1200, MATH 1800.

Ethical Decisions in Business

BSAD 4250 ***3 cr. 3 hr.*** ▲ ●

This course is designed to explore, discuss, and analyze the values and methods that can be used by our future business managers to make ethical decisions in live business situations. It provides a basis for considering the type of corporate policy and environment essential for minimizing the conflict between "right" and "the end justifies the means."

Sales Management

BSAD 4300 ***3 cr. 3 hr.*** ▲ ●

This course enhances the students' understanding of and skills for managing the selling function. The emphasis of the course work is on personal selling as an element in the marketing mix.

Prerequisites: BSAD 2020, 3200, 3300, 3500.

Retail Marketing

BSAD 4310 ***3 cr. 3 hr.*** ▲ ●

This course introduces the student to the nature and scope of retail marketing and management. The course includes the structure of retailing, merchandising, buying, pricing, promotion, organization, as well as management of the retail firm.

Prerequisites: BSAD 2020, 3200, 3300, 3500.

Industrial Marketing

BSAD 4320 ***3 cr. 3 hr.*** ▲ ●

This course centers on the marketing of goods to industrial firms, governmental agencies, and other organizations included within the industrial market. The areas covered in the course include distribution channels, pricing policies, product planning, and market strategy.

Prerequisites: BSAD 2020, 3200, 3300, 3320, 3330, 3500.

International Marketing

BSAD 4330 ***3 cr. 3 hr.*** ▲ ●

This course concentrates on the marketing activities of firms operating in an international market. It provides the student with an understanding of the factors that influence the selling of products in international markets. The planning, organizing, and controlling of international marketing is explored along with its law, history, and economics.

Prerequisites: BSAD 3200, 3300, 3320, 3330, 3500.

Developing Marketing Strategies

BSAD 4340 ***3 cr. 3 hr.*** ▲ ●

Through the use of case studies and, where possible, cooperating businesses and nonprofit organizations, students identify pertinent marketing problems and opportunities, assess the organization's resources, and develop viable marketing programs. The course includes new product development and management strategies for effective marketing policies over the course of the entire product life cycle.

Prerequisites: BSAD 3200, 3300, 3320, 3330, 3500.

Financial Management of Corporations

BSAD 4440 ***3 cr. 3 hr.*** ▲ ●

This course covers the analysis and management of the flow of funds through an enterprise. Cash management, source, and application of funds, as well as term loans and types and sources of long term capital are examined. As an introduction to capital markets, the class explores capital budgeting, cost of capital, and financial structure.

Prerequisite: BSAD 3400.

Business Law II

BSAD 4500 ***3 cr. 3 hr.*** ▲ ●

This course is a continuation of Introduction to Business Law and deals with the law of agency, commercial paper, credit, and the various forms of business.

Prerequisite: BSAD 3500.

Labor Relations and Collective Bargaining I (Private Sector)

****BSAD 4610*** ***3 cr. 3 hr.*** ▲

The course provides an in-depth study of fundamental labor relations issues. Topics covered in the course are the development of federal labor policy, union organization, and union organizing, collective labor-contract negotiation, and contract enforcement. The use of strikes and lockouts as well as boycotts and picketing is explored along with multi-employer bargaining, arbitration, and grievance procedures. Further study includes an investigation of health, welfare, and safety concerns, equal employment opportunity, labor economics, state and federal labor legislation, and the role of government in labor disputes.

Prerequisite: BSAD 3210.

Labor Relations and Collective Bargaining II (Public Sector)

****BSAD 4620*** ***3 cr. 3 hr.*** ▲

This course is a continuation of BSAD 4610. A significant part of the second semester considers public sector collective bargaining and organizing (local, state, national, and within healthcare organizations).

Prerequisite: BSAD 4610.

Labor and Management Relations

****BSAD 4630*** ***3 cr. 3 hr.*** ▲

This course involves an investigation of the American Labor Movement. It is an analytical account of what labor is, why it behaves the way it does, and how it is managed. The course also covers the various organizational forms and models of labor unions.

Labor Law I

****BSAD 4640*** ***3 cr. 3 hr.*** ▲

The course relates basic labor issues to the legal process. The study begins with a brief history of U.S. labor in the courts. Students trace the development of national labor policy in the twentieth century as it is embodied in the National Labor Relations Act and in related federal law and regulation. The course then considers the role of the National Labor Relations Board and federal courts in determining whether labor organization conduct or employer conduct constitute unfair labor practices under the Act. The course relies mainly on primary materials, including both state and federal court decisions and administrative opinions.

Labor Law II

****BSAD 4650*** ***3 cr. 3 hr.*** ▲

This course is a continuation of BSAD 4640.

Prerequisite: BSAD 4640.

Structured Systems Analysis and Design

BSAD 4700 ***3 cr.*** ▲ ●

This course covers the methodology of structured systems development with emphasis on the analysis and design phases of the system development cycle. A case study approach to advanced concepts, it is a course in problem solving wherein the student learns strategy and techniques for dealing with complexities in Information Systems Development.

Prerequisites: BSAD 3710, CSC 2700, CSC 2750.

Data Base Management Systems

BSAD 4720 ***3 cr. 3 hr.*** ▲ ●

This course provides an introduction to the concepts of data base processing with emphasis on application programming in a database environment. Physical and logical organization of data, data relationships, and operational requirements of a database management system are also discussed.
Prerequisites: BSAD 3710, CSC 2700, CSC 2750.

Applied Software Development

BSAD 4730 ***3 cr. 3 hr.*** ▲

As the capstone course in the MIS concentration, this course requires the student to apply concepts, principles, and problem solving techniques, as well as strategies and tools learned in previous MIS and business courses to the development of a realistic computer-based information system of medium complexity.
Prerequisite: BSAD 3720.

International Business Management

BSAD 4880 ***3 cr. 3 hr.*** ▲

The course provides an analysis of the complexities of doing business overseas. Emphasis is on commerce, trade, and investments. Topics include cultural differences, market barriers, business practices, product/market strategies, distribution and organization for small firms and multinational corporations.
Prerequisite: senior status in Business Administration or permission of Department Chairperson.

Business Policy and Strategy

BSAD 4890 ***3 cr. 3 hr.*** ▲ ●

This course integrates all organic management functions. Cases are used as subjects for analysis and systematic decision making practice.
Prerequisite: senior status in Business Administration or permission of Department Chairperson.

Independent Study—Management

BSAD 4903 ***3 cr.*** ▲ ●

Independent Study—Accounting

BSAD 4913 ***3 cr.*** ▲ ●

Independent Study—Marketing

BSAD 4923 ***3 cr.*** ▲ ●

Independent Study-MIS

BSAD 4933 ***3 cr.*** ▲ ●

To study specific, advanced topics in the Business Administration area, students must have the approval of supervising instructor and the department.

Independent Study—Management

BSAD 4902 ***2 cr.*** ▲ ●

Independent Study—Accounting

BSAD 4914 ***2 cr.*** ▲ ●

Independent Study—Marketing

BSAD 4934 ***2 cr.*** ▲ ●

Independent Study—Management

BSAD 4915 ***1 cr.*** ▲ ●

Independent Study—Accounting

BSAD 4925 ***1 cr.*** ▲ ●

Independent Study—Marketing

BSAD 4935 ***1 cr.*** ▲ ●

Independent Study—MIS

BSAD 4945 ***1 cr.*** ▲ ●

Internship

BSAD 4950 ***6 cr.*** ▲ ●

This course is a part time (18 hr. week) internship in either the private or public sector. The purpose of the course is to allow the student the opportunity to synthesize the theoretical learning of the classroom with a practical work situation.
Prerequisite: approval by Internship Director.

Internship

BSAD 4970 ***12 cr.*** ▲ ●

This course is a full semester (36 hr. week) Internship in either the private or public sector. The purpose of the course is to allow the student the opportunity to synthesize the theoretical learning of the classroom with a practical work situation.
Prerequisite: approval by Internship Director.

Internal Departmental Practicums (Business Laboratories)

BSAD 4915, 4925, 4935 (see Independent Studies)

The Business Administration Department offers students opportunities to receive up to six credits by working on actual business projects on campus and in the community.
Prerequisite: permission of Department Chairperson.

Topics in Business

BSAD 5000 ***3 cr. 3 hr.*** ▲ ●

Courses having a narrow focus or those taught on an irregular basis may be offered under the "Topics" heading. New courses may also be taught on an experimental basis under this title.

Chemistry

Key to Course Offerings

Q: designates courses in the Quantitative Scientific Cluster

I: the Ideas and Events Cluster

B: the Human Behavior Cluster

L: the Literature, Language and Arts Cluster

C: Multicultural

IDIS: Interdisciplinary courses

Multicultural and interdisciplinary courses also fulfill a cluster designation.

* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

Industrial Chemistry

CHEM 1000 ***4 cr. 6 hr.*** ▲

This introduction to chemistry includes a study of the periodic table, atomic structure, electrochemistry, thermochemistry, chemical bonding, kinetics, oxidation-reduction, acids-bases, thermodynamics, and a brief introduction to organic compounds. Q
Prerequisite: MATH 1300.

Pre-Biochemistry I

CHEM 1100 ***4 cr. 5 hr.*** ▲ ●

This course provides the fundamentals of chemistry for non-science majors. The course material is largely limited to inorganic concepts. This course replaces Chemistry I and is required for Nursing Majors. Q

Elements of Human Biochemistry and Organic Chemistry

CHEM 1200 ***4 cr. 5 hr.*** ▲ ●

This course is a continuation of Chemistry I or the equivalent. The course material also includes a study of organic chemistry and human biochemistry. This course replaces Chemistry II and is required for Nursing Majors. Q
Prerequisite: CHEM 1100.

General Chemistry I

CHEM 1300 ***4 cr. 6 hr.*** ▲ ●

The course explores the fundamental laws and theories of chemistry such as atomic structure, the periodic table, electrochemistry, descriptive inorganic chemistry, the gas laws, solutions, equilibrium calculations, and chemical bonding. Chemical calculations are emphasized. Q

General Chemistry II

CHEM 1400 ***4 cr. 6 hr.*** ▲ ●

This course is a continuation of General Chemistry I or the equivalent. Q

Prerequisite: CHEM 1300.

Organic Chemistry I and II

CHEM 2000 ***4 cr. 6 hr.*** ▲ ●

CHEM 2100 ***4 cr. 6 hr.*** ▲ ●

Properties of organic compounds are discussed in terms of their molecular structures and reaction mechanisms. The course is recommended for chemistry majors, for those who feel the need for a solid theoretical foundation, and/or others contemplating graduate study. Q

Prerequisites: CHEM 1300 and 1400. (Passing Organic Chemistry I is required for taking Organic Chemistry II).

Analytical Chemistry I

CHEM 3000 ***4 cr. 6 hr.*** ▲

The course emphasizes theory and application of Quantitative Analysis. The lectures stress chemical equilibrium, solubility product, complexometric formation, oxidation-reduction, and stoichiometric calculations.

Prerequisites: CHEM 1300, 1400, 2000, 2100 or the equivalent.

Physical Chemistry I

CHEM 3200 ***4 cr. 6 hr.*** ▲

The course explores the underlying principles of chemistry from a physical chemistry standpoint. Topics of discussion include kinetic theory, theories of the structure of matter, theory of solutions, electrochemistry, thermodynamics, and kinetics.

Prerequisite: CHEM 2100 or the equivalent.

Physical Chemistry II

CHEM 3300 ***4 cr. 6 hr.*** ▲

The course is a continuation of Physical Chemistry I.

Prerequisite: CHEM 3200.

Analytical Chemistry II

CHEM 3500 ***4 cr. 6 hr.*** ▲

The course studies Instrumental Analysis. Laboratory experiments include spectrophotometric, conductometric, potentiometric, and chromatographic analyses.

Prerequisites: CHEM 2100 and CHEM 3000 or the equivalent.

Advanced Topics

Student and faculty availability determine the following course offerings.

Advanced Inorganic Chemistry

****CHEM 3600*** ***3 cr. 3 hr.*** ▲

The course studies bonding theories, acid-base theories, reactions in non-aqueous solvents, complexation and chelation, reactivity, and physical measurements.

Prerequisite: CHEM 1400 or the equivalent.

Natural Products

****CHEM 4000*** ***3 cr. 3 hr.*** ▲

This course examines chemistry isolation, purification, and identification of pure compounds from a variety of naturally occurring substances. Special techniques are introduced whenever feasible.

Prerequisites: CHEM 2000 and 2100.

Biochemistry (See BIOL 3450).

CHEM 4100 ***4 cr. 6 hr.*** ▲

Prerequisite: CHEM 2100.

Polymer Chemistry

****CHEM 4200*** ***4 cr. 6 hr.*** ▲

This introduction to the synthesis and properties of macromolecules also serves as an application of chemical principles to this interesting and important group of materials.

Prerequisites: CHEM 2000 and 2100 or the equivalent.

Radiation Chemistry

CHEM 4300 ***4 cr. 4 hr.*** ▲

The fundamentals of radiation chemistry are explored, including radioactivity, atomic nuclei, nuclear reactions, decay systematics, reactors, and radiation detection and measurement. Emphasis is placed on the use of radioactive materials in chemical applications.

Prerequisites: CHEM 1400, PHYS 1400.

Forensic Chemistry

CHEM 4400 ***3 cr. 3 hr.*** ▲

This course studies forensic detection of crimes by examining physical evidence, such as hair, fibers, paint, drugs, DNA, fingerprints, firearms, and tool marks, as well as toxicology, arson, explosion, serology, rape victims, document, and voice examination.

Independent Study in Chemistry

CHEM 4903 ***1 to 3 cr.*** ▲

This independent study facilitates laboratory research under the guidance of the Chemistry staff.

Prerequisite: permission of the Instructor.

Internship

CHEM 4940 ***3 cr.*** ▲

The Internship gives the student an opportunity to work in an industrial, government, or private research laboratory to gain experience relevant to their major.

Internship

CHEM 4950 ***6 cr.*** ▲

The Internship gives the student an opportunity to work in an industrial, government, or private research laboratory to gain experience relevant to their major.

Topics in Chemistry

CHEM 5000 ***3 cr. 3 hr.*** ▲

Courses having a more narrow focus or those taught on an irregular basis may be offered under the "Topics" heading. New courses may also be taught on an experimental basis under this title.

Clinical Laboratory Sciences

Key to Course Offerings

- * Asterisk indicates that the course may be offered less than once every two years.
- ▲ Undergraduate Day School
- ● Undergraduate Evening School

Introduction to Clinical Laboratory Sciences

CLS 1000 ***1 cr. 2 hr.*** ▲

An integrated lecture-laboratory course designed to acquaint the student with the role and duties of technologists, including employment opportunities and educational requirements for the profession. The Laboratory portion of the class includes: introduction to techniques in hematology, clinical chemistry, immunohematology, and clinical microbiology.

Medical Terminology

CLS 1200 ***1 cr. 1 hr.*** ▲

Instructs students to interpret and define medical words by combining prefixes, suffixes, and root words.

Clinical Laboratory Techniques

CLS 1400 ***3 cr. 5 hr.*** ▲

The course studies the clinical laboratory's role in assessing the kidney in health and disease. The microscopic and chemical analysis of urine is taught with emphasis on correlation of test data to disease diagnosis. Techniques and theory of phlebotomy studied.

Prerequisite: BIOL 2420 or the permission of Instructor.

Basic Hematology

CLS 2000 ***3 cr. 5 hr.*** ▲

This course is an introduction to the composition and formation of blood and blood cells. Routine procedures used in the hematology laboratory such as hemoglobin analysis, cell counting, and identification are performed. Students are introduced to quality control techniques.

Prerequisite: BIOL 1800, CLS 2100 or permission of Instructor.

Basic Laboratory Skills

CLS 2100 ***4 cr. 6 hr.***

Through lecture and laboratory experiences, students will review basic principles of chemistry, laboratory math, and statistics as they learn to carefully measure, calculate results, and quantify various analytes in blood and body fluids using manual and semi-automated methods. Students will also learn principles associated with phlebotomy and become skilled at venipuncture and capillary puncture.

Prerequisite: MATH 1700; CHEM 1300 and 1400.

Professional Issues in Clinical Laboratory Science

CLS 3000 ***3 cr. 3 hr.*** ▲

The course explores economic, political, and social issues pertinent to health care delivery. Professional and personal ethics, interpersonal communication skills, interview techniques, career options for laboratory personnel, basic education, and management strategies are emphasized.

Prerequisite: CLS 1000 or permission of Instructor.

Human Biochemistry I

CLS 3100 ***4 cr. 6 hr.***

Study of the biochemical properties of carbohydrates, amino acids, proteins and lipids specifically related to the human body. Major metabolic pathways of glucose metabolism in the liver and other body cells, mechanisms of enzyme action and bioenergetics will be discussed. Physiological topics related to the gastrointestinal tract, nutrition, liver and muscle function are discussed. Laboratory sessions complement lecture and also include spectrophotometric, electrophoretic, and chromatographic techniques.

Prerequisite: CHEM 1300, 1400, 2000, and 2100.

Immunoassay/Clinical Virology

CLS 3200 ***3 cr. 5 hr.*** ▲

The course studies in vitro antigen-antibody reactions and theory of serological reactions. The practical application of theory to clinical laboratory testing, enzyme assays, immunoelectrophoresis, agglutination and precipitation tests is studied and performed. An overview of viral structure, oncogenesis, and viral infections of man is given.

Prerequisite: BIOL 3900.

Human Biochemistry II

CLS 3150 ***4 cr. 6 hr.***

Continuation of CLS 3100. Topics include the biochemical properties of RNA, DNA, amino acid metabolism and the urea cycle. Physiological topics related to renal and endocrine function, skeletal and mineral metabolism, water balance, and skin are discussed. Laboratory sessions complement lecture and also include urinalysis and sweat testing.

Prerequisite: CLS 3100.

Parasitology/Mycology

CLS 3400 ***3 cr. 4 hr.*** ▲

Life cycles, identification, and clinical pathology of parasites in humans are studied in this course along with common mycotic infections of humans and methods of identification.

Prerequisite: BIOL 3900.

Clinical Laboratory Data Analysis

CLS 3600 ***3 cr. 3 hr.*** ▲

This course examines the application of mathematical principles to the methodology, quality control, method evaluation, and pathophysiological correlations of the clinical laboratory.

Prerequisite: MATH 1700.

Clinical Hematology I

CLS 4000 ***4 cr. 6 hr.*** ▲

Students study the pathophysiology of bone marrow and red cells while performing laboratory tests used in the detection and study of anemias. Introduction to Hematology instrumentation and quality control principles are also examined.

Prerequisite: CLS 2000. Open to senior CLS majors only or permission of Instructor.

Clinical Hematology II

CLS 4050 ***3 cr. 5 hr.*** ▲

The course is the study of hemostasis and tests related to diagnosis of bleeding and thrombotic problems. Pathophysiology of leukemias and tests used for diagnosis and monitoring of treatment are introduced. Body fluid cell analysis is covered. A clinical practicum at an affiliated laboratory is performed at the conclusion of the course.

Prerequisite: CLS 4000. Open to senior CLS majors only and permission of Instructor.

Issues in Clinical Microbiology I

CLS 4100 ***2 cr. 2 hr.***

Students will perform an in-depth investigation of concepts, theories, or problems that are of importance to clinical microbiologists. Students will become skilled at searching the current literature and will enhance their verbal communication skills as they discuss their findings with the group.

Co-requisite: CLS 4400. S/U grading only.

Issues in Clinical Microbiology II

CLS 4150 ***2 cr. 2 hr.***

Continuation of CLS 4100.

Prerequisite: CLS 4100;
Co-requisite: CLS 4450. S/U grading only.

Clinical Chemistry I

CLS 4200 ***4 cr. 6 hr.*** ▲

The course provides a detailed study of the biochemical processes associated with health and disease. Students learn about the measurement of constituents in the blood and body fluids to monitor health and facilitate the diagnosis of disease. Emphasis is placed on interpretation, disease correlation, problem solving, and quantitative techniques.

Prerequisites: CLS 3100 and 3150. Open to senior CLS majors only or permission of Instructor.

Clinical Chemistry II

CLS 4250 ***4 cr. 6 hr.*** ▲

This course is a continuation of CLS 4200. A clinical practicum is performed at an affiliated laboratory at the conclusion of the class.

Prerequisites: CLS 4200. Open to senior CLS majors only and permission of Instructor.

Issues in Clinical Chemistry I

CLS 4300 ***2 cr. 2 hr.***

Students will perform an in-depth investigation of concepts, theories, or problems that are of importance to clinical chemists. Students will become skilled at searching the current literature and will enhance their verbal communication skills as they discuss their findings with the group.

Co-requisite: CLS 4200. S/U grading only.

Issues in Clinical Chemistry II

CLS 4350 ***2 cr. 2 hr.***

Continuation of CLS 4300.

Prerequisite: CLS 4300; Co-requisite: CLS 4250. S/U grading only.

Clinical Microbiology I

CLS 4400 ***3 cr. 5 hr.*** ▲

Students learn techniques for the isolation and identification of common human pathogenic bacteria and methods for susceptibility testing. Instruction includes techniques used in the diagnostic microbiology laboratory.

Prerequisites: BIOL 3900, CLS 3400. Open to senior CLS majors only or permission of Instructor.

Clinical Microbiology II

CLS 4450 ***3 cr. 5 hr.*** ▲

Techniques used to diagnose human infectious disease are covered in this class. The isolation and identification of uncommon human pathogenic bacteria is studied along with antibiotic structure and function. A clinical practicum is performed at affiliated laboratory at the conclusion of the class.

Prerequisites: CLS 4400. Open to senior CLS majors only and permission of Instructor.

Immunohematology I

CLS 4600 ***3 cr. 5 hr.*** ▲

The theory and laboratory techniques involved in blood banking are examined in this course. Areas of study include common blood types, screening and preparation of donors, crossmatching, antigen-antibody reactions, and serological procedures.

Prerequisites: BIOL 2800, 4810. Open to senior CLS majors only or permission of Instructor.

Immunohematology II

CLS 4650 ***1 cr. 2 hr.*** ▲

The course is a continuation of CLS 4600. It includes a short practicum in an affiliated blood bank laboratory.

Prerequisites: CLS 4600. Open to senior CLS majors only and permission of Instructor.

Clinical Correlations I

CLS 4800 ***1 cr. 2 hr.*** ▲

This Seminar is designed to demonstrate the interrelationships between clinical laboratory disciplines. A case study approach is utilized to help students integrate laboratory information.

Corerequisites: CLS 4000, 4200, 4400, 4600. Open to senior CLS majors only or permission of Instructor. S/U grading only.

Clinical Correlations II

CLS 4850 ***1 cr. 2 hr.*** ▲

The course is a continuation of CLS 4800 using the seminar and case study approach.

Corerequisites: CLS 4050, 4250, 4450, 4650. Open to senior CLS majors only or permission of Instructor. S/U grading only.

Independent Study

CLS 4901, 2, 3 ***1, 2, 3 cr.*** ▲

Open to students who have permission of supervising Instructor and department. The course of study, meetings, and project presentation are arranged upon approval.

Internship

CLS 4940 ▲

Topics in Medicine

****CLS 5000*** ***3 cr. 3 hr.*** ▲

Courses that have a more narrow focus or those taught on an irregular basis may be offered under the "Topics" heading. New courses may also be taught on an experimental basis under this title.

Communications/Media

Key to Course Offerings

Q: designates courses in the Quantitative Scientific Cluster

I: the Ideas and Events Cluster

B: the Human Behavior Cluster

L: the Literature, Language and Arts Cluster

C: Multicultural

IDIS: Interdisciplinary courses

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▲ Undergraduate Day School

● Undergraduate Evening School

Systems and Theories of Communication

COMM 1105 **3 cr. 3 hr.** ▲

An introductory course that explores the ways in which communication is studied and discussed in both academic and professional arenas. The course covers the process and social implications of communication. It examines the history and current structure of several media, including print, graphic design, photography, film, television, and sound recording. It also examines the technological and social systems that are associated with the field.

Message Design

COMM 1120 **3 cr. 3 hr.** ▲ ●

The course introduces visual communication for the development of visual literacy. Students become involved with a variety of activities in previsualization, planning, designing, making, and evaluating visual messages. This course specifically relates to the communications concentrations taught in Phase II, including technical writing, television, photography, film, interactive, and graphic design.

Script Writing

COMM 2320 **3 cr. 3 hr.** ▲ ●

Students are instructed in the basics of script writing for film, television, and multi-image productions, including preparation of proposals, treatments, storyboards, and scripts. Script formats covered in the class include documentary, educational, corporate, and dramatic film/video writing. See also ENGL 2320.

Color Theory

COMM 2330 **3 cr. 3 hr.** ▲

Students work on projects developed to enhance their understanding of the basic principles of color as they relate to graphics, film, photography and the moving image. Emphasis is given to the physical, psychological, and perceptual aspects of color. Students are responsible for all graphic supplies.

History of Photography

COMM 2400 **3 cr. 3 hr.** ▲

The course presents a survey of the development of photography to the present day. L

History of Film

COMM 2410 **3 cr. 3 hr.** ▲ ●

The class studies narrative and documentary films by American and foreign directors. Films are screened in each class and discussed. Discussion and lectures range from the artistic and cultural to the psychological and commercial aspects of films. Students write several critiques and a term paper. L

History of TV

****COMM 2420*** **3 cr. 3 hr.** ▲

The course provides a comprehensive analysis of television broadcasting from its inception to the present. Programming, social, and technological aspects of the medium are presented and examined in a lecture and seminar format. Particular emphasis is placed on television's sociological influence and impact on the communication process. I

History of Graphic Design

****COMM 2430*** **3 cr. 3 hr.** ▲

This course presents the history of typography and its pertinence to graphic design from the beginning of written history to the late 1980s. Emphasis is placed on various movement of avant garde typography of the early twentieth century and its influence on present day graphic design. L

Journalism

COMM 2800 **3 cr. 3 hr.** ▲

The course studies the press with emphasis on ethics in news, treatment of contemporary issues, and structuring the news story. Students write individualized assignments. (Credit is not given for both COMM 2800 and ENGL 2800.)

Prerequisites: ENGL 1100, ENGL 1200.

Multimedia Project Design

COMM 3304 **3 cr. 3 hr.** ▲

The course provides an introduction to the history, theory, and practice of designing communications for interactive/multimedia environments. Special attention is paid to flowcharting, branching, hierarchy structures, screen design, storyboards, scripting, and all aspects of user interface design. Students also consider the roles of learning theory and instructional design as they create design documents for course projects.

Prerequisite: one course in a concentration.

Multimedia Tools and Techniques

COMM 3305 **3 cr. 3 hr.** ▲

By using an interactive application students explore the use of digital audio, video, stills, presentation software, and elementary authoring. Students work with advanced features of the computer operating system and common software resources, such as databases and communications.

Prerequisite: COMM 3304.

Interactive Media

COMM 3306 **3 cr. 3 hr.** ▲

The course studies authoring tools and the logic structures that various design tools offer the producer/developer and the production team. Students integrate audio, still imagery, video, and hypertext into course projects.

Prerequisite: COMM 3305.

Multimedia Production

COMM 3307 **3 cr. 3 hr.** ▲

A study of advanced techniques of authoring, design, and production that students apply in sponsored projects. Working in groups of three or four, students simulate a professional design team's production regimen in order to complete an advanced multimedia production of professional portfolio quality.

Prerequisite: COMM 3306.

Multimedia Seminar

COMM 3308 **3 cr. 3 hr.** ▲

This seminar provides an opportunity to study advanced topics of multimedia design and development. Subjects covered in the seminar include design and application of game theory, computerized animation, morphing techniques, and virtual reality.

Prerequisite: permission of the Instructor.

Writing for Advertising

COMM 3430 ***3 cr. 3 hr.*** ▲

The course provides an introduction to the principles, strategies, and ethical issues in writing advertising for various media. Students create written copy for individual unified media campaigns.

Public Relations

COMM 3460 ***3 cr. 3 hr.*** ▲

The focus in this course is on the role of managed communications in public relations unique to industry, human services, and educational institutions. Definitions and concepts, history, potential careers, and research methods are examined.

Technical Documentation

COMM 3470 ***3 cr. 3 hr.*** ▲ ●

This course gives students the opportunity to study and write the basic forms of technical documentation found in business and industry, including end-user manuals and training guides. Examination of graphics, typography, and desktop publishing is considered as they apply to hardcopy production. (See also ENGL 3470.)

Introduction to Film and Video

COMM 3505 ***3 cr. 3 hr.*** ▲

This is the foundation course for the Video/Film concentration. Students are introduced to the basics of production and post-production in the two media. Topics include: understanding and using visual language; film and video camera operation; understanding the film and video production process; basic film and video editing; production crew structure; and interpersonal communication. Students shoot super 8 film and video tape and then edit both the film and video. Student are required to purchase film and video tape as well as pay for processing.

Intermediate Video Production

COMM 3520 ***3 cr. 3 hr.*** ▲

The course focuses on the development of the skills necessary for non-studio, on-location video production, including shooting and recording with color video equipment, location sound recording, location lighting, directing, electronic editing, and other post-production techniques. The student is required to purchase videotape.

Note: the department recommends that this course be taken at the same time as COMM 3580.

Prerequisite: COMM 3505.

Post-Production

COMM 3530 ***3 cr. 3 hr.*** ▲

This is an intensive course in film and video editing, as well as other post-production techniques. Course work includes practice in editing theory, sound effects recording, narration recording, and multi-track sound mixing. The course is based on the use of non-linear editors, the AVID 400 and 4000 Media Composers. Students log films and videos shot in previous classes on the AVID MediaLog, digitize their material to the AVID 400, and edit an off-line version of their program. They then re-digitize at high resolution on the AVID 4000, add titles, special effects, and mix sound. Finally, they print their completed program to tape. In addition, field trips to a commercial television post-production facility and to a film negative cutter are included. Students are required to provide their own video tapes.

Prerequisite: COMM 3540 or COMM 3740 or permission of the Instructor.

Advanced Video Production

COMM 3540 ***3 cr. 3 hr.*** ▲

An upper-level production oriented course provides the opportunity for students to produce work of professional quality. This course draws on the skills of all previous courses in production. Working in production groups, students write, shoot, and begin editing a high-quality video program. Students may choose documentary, experimental, corporate, or dramatic subjects for this production. The final edit is completed on non-linear AVID systems. Student are required to purchase all production materials.

Prerequisite: COMM 3520.

Production Management

COMM 3550 ***3 cr. 3 hr.*** ▲

The course provides an examination of the fundamentals of production management. Topics covered in the class are: production budgets, production scheduling, contracts and agreements, union regulations for actors and crew members, shooting permits, legal implications and financial structures.

Prerequisite: COMM 3520 or COMM 3720.

Cable Communications

****COMM 3570*** ***3 cr. 3 hr.*** ▲

The course provides a detailed consideration of the uses and application potential of cable communications. Topics covered in the class are: a history of cable television, the implications of cable technology for home and business, an overview of cable's impact on society, as well as the process involved in cable licensing and renewal.

Prerequisite: COMM 3500.

Studio Lighting and Production

COMM 3580 ***3 cr. 3 hr.*** ▲

The course provides an introduction to the techniques of lighting, both on location and in the studio. Topics covered in the class include: the use of lighting instruments; lighting control media and devices; location lighting techniques; studio lighting techniques; camera movement; composition; metering; the use of lenses; electrical and safety considerations; grip techniques and equipment. Students are required to purchase video tape.

Note: The department recommends that students take this course simultaneously with either COMM 3520 or COMM 3710.

Prerequisite: COMM 3505.

Photography I

COMM 3600 ***3 cr. 3 hr.*** ▲

The course introduces technical and aesthetic aspects of photography, such as exposure techniques, film, paper, and basic 35 mm camera work. Students are responsible for all paper, film, supplies, and mounting materials.

Photography II

COMM 3610 ***3 cr. 3 hr.*** ▲

The course is a continuation and refinement of the material covered in COMM 3600. Editing and sequencing along with filters, flash, fill-flash, and an introduction to the studio is covered.

Prerequisite: COMM 3600.

Photography III

COMM 3620 ***3 cr. 3 hr.*** ▲

The course introduces medium format photography. Lighting, portraiture, and commercial photography are explored in professionally designed studios. Students are responsible for all paper, film, and chrome processing.

Prerequisite: COMM 3610.

Large Format Photography

COMM 3630 ***3 cr. 3 hr.*** ▲

The course specializes in 4 x 5 photography and the use of the Zone System for exposure and development. Students are responsible for all paper and film supplies.

Prerequisite: COMM 3610.

Color Photography

COMM 3640 ***3 cr. 3 hr.*** ▲

The course introduces the basic theory of color photography. Printing is emphasized and all work is C-prints and chromes.

Prerequisite: COMM 3610.

Digital Photography

COMM 3645 ***3 cr. 3 hr.*** ▲

The course studies the fundamentals of digital image acquisition, scanning, image manipulation, and various output devices.

Prerequisite: COMM 3620 or 3640 or permission of Instructor.

Photo Management

COMM 3660 ***3 cr. 3 hr.*** ▲

The course studies photographic space design for private, commercial, and educational use. The class promotes an understanding of flow, function, equipment inventory, record keeping, and budget control.

Prerequisite: COMM 3610.

Slide Production Techniques

****COMM 3680*** ***3 cr. 3 hr.*** ▲

This course introduces the specialized equipment, films, and special processes used in slide production for professional, industrial, medical, and educational applications.

Prerequisite: COMM 3600.

Photography Seminar

****COMM 3690*** ***3 cr. 3 hr.*** ▲

The seminar provides an opportunity for advanced study in the medium. Students are responsible for all paper and film supplies.

Prerequisites: COMM 3620, 3630, or 3640.

Intermediate Film Production

COMM 3710 ***3 cr. 3 hr.*** ▲

Intermediate Film Production introduces the tools of professional motion picture production. Topics include: 16mm sync camera operation, lens and filter differentiations, camera support, shooting tests of several film emulsions, film laboratory procedures, and use of sync sound equipment (Nagra and DAT). Students also learn location recording techniques, resolving to 16mm magnetic film, sound processing and synchronization of dailies on a flatbed editor.

Note: the department recommends that this course be taken at the same time as COMM 3580.

Prerequisite: COMM 3505.

Advanced Film Production

COMM 3720 ***3 cr. 3 hr.*** ▲

The course provides an advanced examination of professional 16mm production and post-production techniques. Topics covered in the class include: location shooting, sound recording and editing, film editing, negative matching, and interlock mixing. Students produce a professional 16mm film during the course. Film and processing costs are shared by all students.

Prerequisite: COMM 3710.

Directing Video/Film

****COMM 3730*** ***3 cr. 3 hr.*** ▲

This course examines the role of the director. Topics covered in the class include: script analysis and breakdowns, casting, blocking the camera and the actors, acting, and directing actors. The class focuses on the relationships between the director and producer, actor, writer, and editor as well as between the director and the cinematographer. The role of the assistant director is defined, and unions, talent agencies, schedule planning, and interpersonal communications are explored. Students are responsible for all materials.

Prerequisites: COMM 3510/3580 or 3710/3580.

Advanced Digital Production

COMM 3740 ***3 cr. 3 hr.*** ▲

In this course students may shoot 16mm film, video, or digital formats. Topics covered in the class include: techniques for shooting film for video; telecine techniques; resolving sound to video tape; time code fundamentals; editing video tape; understanding paintbox, digital effects, and other post-production techniques; and preparing to edit non-linear on the AVID system. Students are required to purchase film and video tape, as well as processing telecine services.

Prerequisite: COMM 3720 or 3540.

Graphic Design I

COMM 3810 ***3 cr. 3 hr.*** ▲

The course provides a basic introduction to the design process and the principles of design. Emphasis will be placed on problem solving and relating graphic design to communication. Students will be introduced to tools and equipment used in the field while working on layout and creative conceptualization. Students are responsible for all graphic supplies. (Credit is not given for both COMM 3810 and IT 2520.)

Graphic Design II

COMM 3820 ***3 cr. 3 hr.*** ▲

By using a problem solving approach to graphic design, students learn advanced graphic design principles. Students design and prepare highly finished comprehensive layouts. Projects include Marker Layout, Typography, Publication Design, Poster Design, and Corporate Identity. Problems are approached and solutions reached through teamwork. Projects are evaluated through joint critique. Students are responsible for all graphic supplies.

Prerequisite: COMM 3810.

Graphic Design III

COMM 3830 ***3 cr. 3 hr.*** ▲

By concentrating on technical and creative illustration, students have an opportunity for advanced study in graphic design. Students work in various media, including pen and ink, water color, marker, and colored pencil. Students are responsible for all illustration supplies.

Prerequisite: COMM 3820.

Graphic Management

COMM 3840 ***3 cr. 3 hr.*** ▲

The course studies the practices of advertising, sales, and marketing management in business, industry, and education. Emphasis is placed on the graphic designer in the role of creative art director, production manager, and designer illustrator. Topics of study include careers in graphic design and portfolio design and preparation.
Prerequisite: COMM 3820.

Publication Design

COMM 3850 ***3 cr. 3 hr.*** ▲

The course examines all aspects of publication design including designing with type, layout, combining photography and illustration with text, and print production. Students employ these skills in the design of newsletters, booklets, magazines, book and web page design. Portfolio quality pieces are produced in this advanced level course. Students are responsible for all graphic supplies.
Prerequisites: COMM 3820, 3890.

Writing for Business and Technology

COMM 3860 ***3 cr. 3 hr.*** ▲ ●

The course is for students interested in writing in the business, industry, and management context. Topics covered in the class are: business correspondence, description of process and mechanisms, sets of instructions, proposals, abstracts, and reports. (Credit is not given for both COMM 3860 and ENGL 3860.)

Feature and Magazine Writing

COMM 3870 ***3 cr. 3 hr.*** ▲

The course examines writing feature articles for newspapers, magazines, and trade journals. (Credit is not given for both COMM 3870 and ENGL 3870.)

Typography

COMM 3880 ***3 cr. 3 hr.*** ▲

The course is designed to teach the fundamentals of typography. Students will create projects that will enhance their knowledge of professional layout and design programs while paying special attention to the subtleties of typography. Comparison will be made between preparing simple and complex files for print. Students are responsible for all graphic supplies.
Prerequisite: COMM 3820, 3890.

Computer Graphic Design

COMM 3890 ***3 cr. 3 hr.*** ▲

The course introduces the techniques and tools utilized in electronic media to create, manipulate, and organize the graphic image. This course demonstrates present and future applications of electronically generated images as they relate to the graphic designer. Students have hands-on experience with computer graphics and electronic publishing hardware and software. Students are responsible for all supplies.
Prerequisite: COMM 3820.

Graphic Design Photography

COMM 3900 ***3 cr. 3 hr.*** ▲

The course covers the commercial applications of photography, including product presentation, advertising, illustration, promotion, and publication photography. Students learn the role of the designer as a photographer who solves assigned problems using various techniques including digital photo and image manipulation. Students are responsible for all graphic supplies.
Prerequisites: COMM 3600, 3820.

Graphic Arts Production

COMM 3910 ***3 cr. 3 hr.*** ▲

The course examines the skills necessary to produce printed products. Students complete projects with electronic page layout programs, operate process cameras, prepare printing plates, precisely match ink colors, and print their projects. The very important relationship between the designer and the commercial printer is emphasized. (Credit is not given for both COMM 3910 and ITEC 1500.)
Prerequisite: COMM 3810 or permission of Instructor.

Advanced Computer Graphic Design

COMM 3920 ***3 cr. 3 hr.*** ▲

This is an advanced course in computer graphics covering application of electronically generated images as they relate to the graphic designer and the use of computer graphics work stations. Topics of study include: digital typography, illustration, electronic publishing, and digital photography. Students are responsible for all supplies.
Prerequisites: COMM 3820, 3890 or permission of the Instructor.

Human Communications Technology

COMM 4200 ***3 cr. 3 hr.*** ▲

The course provides for the analytic study of communication competencies needed in the individual, dyadic, and technological domains of information exchange. Students conduct an intrapersonal self-inventory to identify those beliefs, attitudes, and values which influence human interfacing with communication technologies. From this data, the development of skills for principled negotiation as a social process with a communication transaction serves as the foundation for the course.
Prerequisite: senior status.

Instructional Training Design

COMM 4210 ***3 cr. 3 hr.*** ▲

The course examines instructional communications as they apply to selected learning theories and various instructional approaches or methods. Strong emphasis is given to the application of learning theories to interactive technologies.
Prerequisite: junior status.

Organizational Communication

COMM 4220 ***3 cr. 3 hr.*** ▲

This course is designed to introduce students to contemporary concepts about organizational communication functions, the structure of organizational communication systems and organizational levels at which communication occurs. Student research and field study will consist of a communications audit of a selected organization and the analysis at the related human, hardware, and software interfacing.
Prerequisite: junior status.

Communications Law and Ethics

COMM 4230 ***3 cr. 3 hr.*** ▲

The course provides an introduction to communications law and media ethics that raise important issues for all students in the Communications/Media department. Topics discussed in the class are: copyright law, libel, censorship, cable and broadcast law, privacy, and the U.S. legal process.
Prerequisite: junior status.

Media Criticism

COMM 4240 ***3 cr. 3 hr.*** ▲

In the context of film and video work, students examine several approaches to evaluating media, including political, cultural, social, genre, and feminist.
Prerequisite: junior status.

Research Seminar

COMM 4250 ***3 cr. 3 hr.*** ▲

The seminar provides an opportunity to explore and learn various research methodologies, such as archival research, content analysis, and field study. The seminar is offered with various focuses, depending upon student and Instructor need and interest.

Prerequisite: junior status.

Advanced Professional Study

****COMM 4260*** ***3 cr. 3 hr.*** ▲

This interdisciplinary production course combines the talents of students from two or more concentrations. Students learn to work in a production team with a client to produce professional quality video, film, slide-tape, print, graphic, and/or interactive materials.

Prerequisite: completion of five courses within a concentration.

Pre-Press Production

COMM 4270 ***3 cr. 3 hr.*** ▲

Students need a bridge between design and the complex world of printing. File preparation for print reproduction will be stressed in this comprehensive, advanced level course. Printing terminology, job specification, file formatting, bid writing, color proofing, trouble shooting electronic documents, and mechanical press related problems are studied.

Prerequisite: COMM 3820, 3890.

Seminar in Communication Theory

COMM 4205 ***3 cr. 3 hr.*** ▲

The seminar provides detailed and extensive study of communication theories, particularly interpersonal and mass communication theories.

Internship

COMM 4880 ***12 cr. 36 hr.*** ▲ ●

This full semester on- or off-campus Internship requires fifteen thirty-six-hour weeks of work. Communications/Media majors apply their knowledge and skills to the practical solution of communications problems.

Prerequisites: completion of all Phase I and II Communications/Media courses with a cumulative Communications/Media Grade Point Average of 2.5 or better. Approval by Communications/Media Interview Committee.

Independent Study

COMM 4901 ***1 cr. 3 hr.*** ▲
COMM 4902 ***2 cr. 6 hr.*** ▲
COMM 4903 ***3 cr. 9 hr.*** ▲
COMM 4906 ***6 cr. 18 hr.*** ▲

The Independent Study provides an opportunity for highly self-motivated students to explore areas of Communications/Media not provided within the departmental curriculum. Research methodology is to be used and a written monograph is to be presented to the faculty sponsor. Approval of a faculty sponsor, consent of the advisor, and permission of the Chairperson is required.

Field Study

COMM 4940 ***3 cr. 9 hr.*** ▲
COMM 4950 ***6 cr. 18 hr.*** ▲

The Field Study provides an experience that permits students to develop the knowledge and skills acquired in the classroom. A portfolio of the work completed is to be presented to the faculty sponsor. Approval of a faculty sponsor, sanction of a site supervisor, consent of the advisor, and permission of the Chairperson is required.

Topics in Communications/Media

COMM 5000 ***3 cr. 3 hr.*** ▲ ●

This course provides the opportunity for students and faculty to explore topics of current interest to them. The content of this course varies from semester to semester. It is designed to allow the teaching of material not normally covered in any other course or to present a new course on a trial basis. The content may be theoretical or drawn from one of the concentrations.

Computer Information Systems

See course offerings under Business or Computer Science.

Computer Science

Key to Course Offerings

Q: designates courses in the Quantitative Scientific Cluster

I: the Ideas and Events Cluster

B: the Human Behavior Cluster

L: the Literature, Language and Arts Cluster

C: Multicultural

IDIS: Interdisciplinary courses

Multicultural and interdisciplinary courses also fulfill a cluster designation.

* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

Introduction to Programming (Visual Basic)

CSC 1000 ***3 cr. 3 hr.*** ▲ ●

This course provides an opportunity to learn a higher level programming language, to gain experience in the design, coding and utilization of computer programs, and to gain insight into operating a computer. Topics covered in the class include: the syntax and semantics of a higher level programming language; the design, coding, testing and application cycle; application areas; and man-machine interrelationships. Several programming assignments are included. Q

Prerequisite: a working knowledge of high school algebra. (CSC 1000 does not carry credit toward a Computer Science major or a Computer Science minor.)

Internet Communications

CSC 1050 ***3 cr.*** ***3 hr.***

The internet plays a crucial role in the information revolution. It is used increasingly for personal and business communications, for commerce and exchange of ideas, and as a source of information and entertainment. This course introduces the student to various components of the Internet such as the web, email, discussion groups, ftp, telnet etc. Tools and techniques for efficient web browsing will be taught. Security issues involved in using the Internet will be discussed in detail. Students will design simple web pages and publish them on the Internet.

Computer Applications Programming I

CSC 1100 ***3 cr. 3 hr.*** ▲ ●

This is an introductory level study of the computer and application programming techniques. The course introduces an integrated package of programs, (Microsoft Office version 7.0 for Windows '95 including Spreadsheet, Database, and Word Processor), which have direct applications within each student's specific discipline. The course concentrates on the use of each individual application as a stand-alone tool. The student learns how to construct a document, build a database, and formulate a spreadsheet using the proper tool for each exercise. Q

Prerequisite: a working knowledge of high school algebra. (CSC 1100 does not carry credit toward a Computer Science major or a Computer Science minor.)

Basics of Web Design

CSC 1150 ***3cr.*** ***3 hr.***

This course is about creating web pages using the latest version of HTML. The course covers the basics of HTML code and tools for creating simple web pages using Composer. Students will learn to work directly with HTML tags to create forms, frames and cascading sheets, to embed music and other multimedia and to add simple scripts. A detailed discussion of the code in the Head section and its purpose will be covered. Topics included: basics of the Internet, World Wide Web, browsers, hyperlinks, URL's, protocols and HTML, elements of HTML code, creating pages using basic tags for formatting, creating pages with composer, incorporating tables and images, understanding the head section elements and the body section elements, creating frames and targeting frames, creating forms, creating style sheets, adding multimedia, java applets and java scripts, publishing web pages.

Introduction to Windows and Word-processing

CSC 1200 ▲ ●

This course introduces the student to personal computers using Microsoft Windows. Students also learn word processing. The student becomes proficient in the use of Microsoft Windows and advanced concepts in word processing. (CSC 1200 does not carry credit towards a computer science major or a computer science minor.)

Introduction to Spreadsheets and Databases

CSC 1300 ***3 cr. 3 hr.*** ▲ ●

This course introduces the student to spreadsheets/databases for Windows. The student becomes proficient in the use of spreadsheets/databases as well as in the use of built-in functions for business, family, etc. Q

Prerequisite: college level math skills are a must in this course. (CSC 1300 does not carry credit toward a Computer Science major or a Computer Science minor.) (Math/Science, Quantitative.)

Computer Science I

CSC 1500 ***3 cr.*** ***3 hr.***

This course introduces Computer Science by using a high-level programming language. Students will be taught to design programs using a top down modular approach and code these programs using a strong structured style. This course provides a solid background for further studies in Computer Science by preparing students to enroll in the more specialized high-level software courses. Q

Computer Science II

CSC 1550 ***3 cr.*** ***3 hr.***

This course presents methods of organizing data and program operations consistent with modern software engineering practices. Data structures includes a study of: data abstraction using enumerated data types, arrays, records, files, sets, and pointer types. Program design and coding practices to be examined include: stepwise refinements, separation of problem specification and implementations, and separately compiled modules. Q

Prerequisite: CSC 1500

Introduction to Electronics

CSC 1600 ***4 cr. 5 hr.*** ▲ ●

Offered in the spring semester for day students.

This course provides an introduction to analog circuits and modern solid state devices, including diode rectifiers, power supply design, OP amps, and oscillator circuits. Extensive laboratory work illustrates the operation and behavior of circuits, as well as the use of modern laboratory test equipment. Topics covered in the class include: basic circuit analysis, semiconductor principles, diodes, power supply design, bipolar and FET transistor applications, OP AMP circuits and applications, oscillators, and linear integrated circuits. Weekly laboratory sessions included.

Digital Electronics

CSC 1650 ***4 cr. 5 hr.*** ▲ ●

Offered in the fall semester for day students.

A study of the design and application of both asynchronous and synchronous electronic logic circuits including: Boolean, Karnaugh and state variable design techniques. Counters, registers, serial and parallel adders, and arithmetic units are included. Topics covered are: Boolean algebra, algebraic simplifications, Karnaugh mapping, Quine McCluskey method, combinational logic circuits, sequential logic circuits, comparison of TTL, MOS, ECL logic families, the arithmetic unit, coding and decoding, parity detection, and generators and multiplexers. Extensive laboratory work supplements the topics studied.

Prerequisite: CSC 1600.

Computer Graphics for Non-Majors

CSC 2000 ***3 cr. 3 hr.*** ▲

This course is designed to teach non-computer science majors the fundamentals of graphics programming using Turbo Pascal or Basic on the AT & T computer. Students write programs demonstrating mastery of the following graphics techniques: rotation, scaling, translation, clipping, windowing, graphing, and animation.

Prerequisites: CSC 1000 or CSC 1500 or permission of Instructor.

Advanced Web Design with Scripting

CSC 2150 ***3cr.*** ***3hr.***

Scripting is used to add programming capabilities to HTML code to create dynamic and more interactive web pages. Basics of helper applications, plug-ins, MIME types, CGI, Java applets, and Live wire will be introduced. Students will learn Netscape's JavaScript as a scripting tool for creating interactive and dynamic web pages. Operators, statements, functions, event handling and objects of this programming language will be studied. Students will learn how to integrate Java applets and JavaScript and how to interface JavaScript with CGI programs.

Prerequisite: CSC 1150 or equivalent knowledge.

Assembly Language Programming

CSC 2500 ***3 cr. 3 hr.*** ▲ ●

Offered in the fall semester for day students.

This introduction to the fundamental operations of the computer system at the assembly language level is recommended for students who desire an in-depth knowledge of the internal functioning of a modern computer. This course helps advance a student's programming skills. Topics examined include: numerical and character representations, loading routines, console operations, mnemonic operations, instruction formats, location counters, addressing modes, parameter passing, subroutine linkage, macros, conditional assembly, device controllers, character-to-integer conversions, and simple data structure realizations on the Intel 8086 processor. Q

Prerequisite: CSC 1550 or permission of Instructor.

Systems Programming

CSC 2560 ***3 cr. 3 hr.*** ▲ ●

Offered in the spring semester for day students.

This course provides the student with the fundamentals of structured programming at the systems level. UNIX™ is used as a base for the course, allowing the student to become familiar with a well-known, flexible, industry-standard operating system. A structured approach is stressed in all assignments, and emphasis is given to both intermediate and low-level programming tasks. Students obtain a thorough knowledge of the C language, comfort in using the UNIX™ operating system, a good understanding of intermediate data structures, and an appreciation for a systems approach to low-level programming tasks. Q

Prerequisite: CSC 2500 or equivalent.

Computer Organization

CSC 2600 ***4 cr. 5 hr.*** ▲ ●

The purpose of this course is to provide a thorough discussion of the fundamentals of computer organization and architecture, and to relate these to contemporary computer design issues. After a brief review of the basic digital components used, the steps that a designer would go through in the design of an elementary systems are covered followed by a discussion of the organization and design of the central processing unit (CPU) and various control system implementations. The input/output and memory subsystems are included as is a brief discussion of multiprocessing systems, pipelining, and virtual memory.

Prerequisites: CSC 1650, CSC 2500.

COBOL-I

CSC 2700 ***3 cr. 3 hr.*** ▲ ●

The course introduces the COBOL programming language and top-down program design by using the ideas of structured programming. Students design and code COBOL programs for the solution of problems requiring multiple fixed and/or variable length records for a sequential file. Some of the techniques used to process business data are covered. Other topics studied in the course include: identification, environment, data and format design, input data, record and file design, top-down program design, arithmetic and logical operations, sequential disk files, and table handling.

Prerequisite: CSC 1550.

COBOL-II

CSC 2750 ***3 cr. 3 hr.*** ▲ ●

The course studies the facility of COBOL for table and file handling with particular attention to indexed sequential files and variable length records. A substantial number of programming projects are included in the course. Topics covered include: sorting and merging files, table handling, variable length records, indexed sequential access methods, file creation, and updating and reporting.

Prerequisite: CSC 2700.

Interactive Computer Graphics I

CSC 3000 ***3 cr. 3 hr.*** ▲ ●

This is a course in two-dimensional graphics software engineering in which algorithms for picture generation and manipulation are presented in class and implemented by the student. Topics covered in the class include: line and circle generation, transformations, clipping and windowing, display files, and interactive methods and devices.

Prerequisites: CSC 1550, CSC 2560, MATH 2400.

Operating Systems

CSC 3100 ***3 cr. 3 hr.*** ▲ ●

Offered in the spring semester.

This course examines the internal structure and operation of operating systems with an emphasis on their design criteria and approaches. Topics covered in the class include: scheduling, queue management, device drivers, file systems and multiprocessor systems. A working knowledge of at least one higher level systems language and computer data structures is assumed.

Prerequisites: CSC 2560, CSC 2600.

Programming Languages

CSC 3200 ***3 cr. 3 hr.*** ▲ ●

The course studies algorithmic and symbolic programming languages. Languages are selected for study based on their current/predicted importance as well as their features that support fundamental aspects of software engineering. Q

Prerequisites: CSC 2500, CSC 2560.

Simulation I

****CSC 3300*** ***3 cr. 3 hr.*** ▲

The purpose of this course is to introduce the art and techniques of system simulation. A higher-level programming language (FORTRAN and/or PASCAL) and a discrete system simulation language (GPSS) are used in the course. Topics covered in the class include: theory of system simulation, design of system simulation models, and Monte Carlo technique. Several programming assignments are required.

Prerequisites: CSC 2560, MATH 2400.

Data Communications/Networking

CSC 3400 ***3 cr. 3 hr.*** ▲ ●

This course examines local area network (LAN) technology and architecture through basic data communications principles, newly developed concepts, and practical hands-on experience. All networking fundamentals are presented based on the modular approach of the ISO standards. Network models studied include: LAN, the high speed local network (HSLN), and the digital switch/digital private branch exchange (PBX). Students gain experience through assigned projects using modems, AT&T's Information System Network (ISN) and both DOS and UNIX™ computer systems. Protocol development and complex mesh networks are also studied in the course.

Prerequisites: CSC 2500, CSC 2560, CSC 2600.

Local Area Networks

CSC 3450 ***3cr.*** ***3hr.***

This course develops both the hardware and software fundamentals used in local area networks (LANS) including the physical interface, cabling, communication protocols, as well as network services and network standards. This applied, hands-on course will examine topics such as data connectivity, interoperability, and network operating systems from a practical approach with the student setting up different network configurations in the laboratory. To allow for distributive processes as well as wide area accessibility, all networks developed by students will include TCP/IP protocols and will be interfaced with the internet.

Prerequisite: CSC 2500

Object Oriented Programming

CSC 3500 ***3cr.*** ***3hr.***

This course covers object oriented programming principles in detail. The terminology of object oriented design principles is introduced and the way in which these concepts are implemented by an OOP language is discussed. Topics covered include an overview of OOP, classes, function and operator overloading, inheritance, polymorphism, virtual functions, file manipulation, templates exception handling.

Prerequisite: CSC 2560

Windows Programming

CSC 3550 ***3cr.*** ***3hr.***

This course covers the basics of Windows programming. Students learn to program under Windows in C using raw Windows application programming interface (API) calls. Topics covered include: Basics of Windows programming, windows management, painting with text, GDI graphics, bitmaps and fonts, keyboard and mouse input windows timers, child window controls, windows resources, menus, accelerators, dialog boxes.

Prerequisites: CSC 2560

Microprocessors

CSC 3600 ***4 cr. 5 hr.*** ▲ ●

Offered in the fall semester for day students.

The course provides a detailed study of the microprocessor and its applications. Emphasis is placed on a current microprocessor, its hardware and software and its associated family of integrated circuits. Students design a microprocessor system, configuring the random access memory, the read-only memory, and peripheral devices using peripheral interface adapters. Students reinforce theory with extensive laboratory work.

Prerequisite: CSC 2600.

Algorithms and Data Structures

CSC 3700 ***3 cr. 3 hr.*** ▲ ●

Offered in the spring semester.

This course explores data structures and algorithms in the context of problem solving by use of computers. Data structures are presented as objects of abstract data types on which certain operations can be performed. The data structures covered include: lists, stacks, queues, mappings, priority queues, trees, balanced trees, graphs, and dictionaries. Different programming techniques, such as divide and conquer, dynamic programming, and backtracking, are presented and important graph algorithms are discussed.

Prerequisites: CSC 2560 with MATH 3100 recommended.

Bit-Slice Microprocessor Design

***CSC 3800** *3 cr. 3 hr.* ▲

This course introduces bit-slice microprocessor components and the design required to form a flexible high speed computer system. Vertical and horizontal microprogramming techniques are considered. The implementation of a machine-level instruction set in microcode is covered. Theory is supported by applied laboratory work using a current bit-slice evaluation system.

Prerequisites: CSC 2500, CSC 2600.

Numerical Methods for Digital Computation

***CSC 3900** *3 cr. 3 hr.* ▲

This course provides the student with a study of basic algorithms used in scientific computer work and affords an opportunity to apply related programming techniques. The emphasis is placed upon building algorithms for the solution of numerical problems. The sensitivity of these algorithms to numerical errors and the efficiency and accuracy of these algorithms on various computers is also stressed. The student is expected to complete a number of computational projects using suitable procedure-oriented programming languages.

Prerequisites: MATH 2400, CSC 1550.

Compiler Construction

***CSC 4200** *3 cr. 3 hr.* ▲

The course studies the techniques involved in the analysis of source language code and the generation of efficient object code. The focus is more on the front end of the compiler (analyzer) than it is on the tail end (or generator). By working in small project teams students modify an existing compiler. Topics covered in the class include: language definition; lexical, syntactic, and semantic analysis; and code generation. Several programming assignments are included.

Prerequisites: CSC 2500, CSC 2600 with CSC 3200 recommended.

Software Design

***CSC 4400** *3 cr. 3 hr.* ▲ ●

This course provides the student with an opportunity to obtain practical experience in developing and implementing software systems. Students work in project teams and apply principles of structured design and coding toward the solution of assigned problem(s). The software projects undertaken in this course vary, therefore it is recommended that interested students consult with the course instructor prior to enrolling.

Prerequisites: completion of Computer Science core courses and permission of Instructor.

Database Design

***CSC 4500** *3 cr. 3 hr.* ▲ ●

This course presents the basic concepts of a database system. The three distinct approaches to the design of such a system, namely, relational, hierarchical, and networked, are studied in detail. The problems of security and integrity in a database system are also studied. Distributed database systems are discussed, if time permits. Various programming projects are assigned.

Prerequisite: CSC 3700.

Advanced Assembly Language

***CSC 4670** *3 cr. 3 hr.* ▲ ●

This advanced programming course is designed for students to develop a complete and integrated system of hardware interfacing and data analysis in a computer laboratory environment.

Prerequisites: CSC 2500, CSC 2600.

Programming Practicum

***CSC 4700** *3 cr. 3 hr.* ▲ ●

This course provides an opportunity for a student, working under the direction of a participating faculty member, to study or conduct research in an area not covered in other courses. Examples of areas of study include: computer graphics, compilers, operating systems, computer-aided instruction, microprogramming, and data structures. The background required of the student to participate in a Practicum depends entirely on their particular area of study or research.

Prerequisite: permission of Instructor is required to enroll in the course.

Independent Study

CSC 4901, 4902, 4903, 4904, 1,2,3,4 cr. ▲ ●

The Independent Study is available to students who have permission of the supervising Instructor and the department. The course of study, meetings, and credit are arranged upon approval.

Internship

CSC 4940, 4950, 4960 3, 6, 12 cr. ▲ ●

Topics in Computer Science

***CSC 5000** *3 cr. 3 hr.* ▲ ●

The objective of this course is to study a topic of current interest in computer science. This course serves as a vehicle for curriculum experimentation and/or enrichment. The course of study should provide an understanding of some current advance in computer science and/or greater understanding of a particular topic that is of current interest. Prerequisites depend on the topic of study, but generally about five prior computer science courses is the minimum background expected.

Early Childhood, Elementary, Middle School, and Secondary Education

Key to Course Offerings

* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

Personal Reading Improvement

EDUC 1000 ***1 cr. 3 hr.*** ▲

Individualized reading programs are tailored to meet the particular needs of each student. Students experiencing difficulty in understanding what they read engage in programs stressing comprehension skills. Students with good comprehension but with slow reading rates receive assistance in acquiring skills to at least double their speed. Additionally, all students are given instruction in reading at different rates for different purposes.

Personal Reading Improvement II

EDUC 1010 ***1 cr. 3 hr.*** ▲

This course is a continuation of Personal Reading Improvement I.

Early Childhood Foundations

EDUC 1100 ***4 cr. 5 hr.*** ▲

This course gives a brief orientation on the developmental philosophy and goals of early childhood education. Students consider educational procedures used in facilitating the development of the child. They also explore the role of the teacher, the environment, and the appropriate instructional strategies to use with young children. The course is required of all Early Childhood majors.

Reading in Early Childhood Education

EDUC 2100 ***4 cr. 5 hr.*** ▲

The reading process and factors influencing the development of reading are examined. Pre-reading and reading skills are identified, and techniques for assessment of skills are presented. Methods and materials for teaching primary reading are discussed and illustrated. A pre-practicum in the reading area is required.
Prerequisite: EDUC 2110.

Behavioral Science in Early Childhood I: Child Development and Observation

EDUC 2110 ***4 cr. 5 hr.*** ▲

This course includes a study of principles, patterns, and theories of human development and learning as well as principles and techniques of naturalistic and standardized child study. Observation, recording, synthesis, and interpretation of the behavior of young children occurs within a pre-practicum setting. Written case studies are required. This course is a requirement for Early Childhood majors.
Prerequisite: General Psychology or Introduction to Psychology. Required for EDUC 3110.

Language Arts in Early Childhood Education

EDUC 2200 ***4 cr. 5 hr.*** ▲

This course presents a timely and concise summary of important issues confronting the teacher and learner when developing a mastery of language arts in the Early Childhood Setting. The focus is on methodology related to the teaching of listening, speaking, reading, and writing.

Fine Arts in Early Childhood Education

EDUC 2400 ***4 cr. 5 hr.*** ▲

This course studies the integration of art, music, and movement into curricula for young children by using an interdisciplinary approach. Investigation of the objectives, methods, and materials in the fine arts is conducted.
Requirement: to be taken concurrently with student teaching.

Pre-Kindergarten Clinical

EDUC 2500 ***4 cr. 5 hr.*** ▲

This course is designed for the student of Early Childhood Education who is interested in exploring early childhood prior to the Kindergarten and public school experience. The students investigate a variety of models and curriculum programs designed for infants, toddlers, and preschool-aged children. Further the student experiences a wide variety of pre-Kindergarten settings and explores the systems designed to create, administer, and evaluate such programs.

Parent-Child Relations in Education

EDUC 2700 ***4 cr. 5 hr.*** ▲

This course explores the role of the parent in the development of the child and how the parent relates to the educational system. This course stresses awareness of how parents stimulate the growth of behavioral trends in their children and how they can be useful as resources to improve the child's educational environment.
Prerequisite: EDUC 2110 or Child Development.

Science in Education

EDUC 2750 ***3 cr. 3 hr.*** ▲

In this course contemporary elementary and middle school science methods, materials, courses of study and science texts are examined. Science teaching units are developed and demonstrated.

Integrated Creative Arts Teacher Education Program

****EDUC 2800*** ***15 cr. 45 hr.*** ▲

This is a full-semester experience which includes five weeks of classroom instruction and training in creative work in visual arts, language arts, movement, music, and integrating art forms. Subsequent to the initial training period, students are placed in field stations for classroom experiences for the remainder of the semester. While in the field stations, students assist teacher-specialists in one or more of the art form areas. They also develop and implement programs for the specific classroom and its pupils so as to foster the pupils' personal expression through creation in the arts. A weekly seminar on Wednesday afternoons from 1 p.m. to 3 p.m. is held at the College for the purpose of workshop experiences and problem solving. Students are visited and evaluated regularly by College faculty as well as by cooperating teacher-specialists in the schools. Students are expected to be present in the school throughout the semester.

Caring for Infants and Toddlers

EDUC 2900 ***4 cr. 6 hr.*** ▲

This course assists students in the development of attitudes, knowledge, and skills important to understanding and supporting the interactions of infants and toddlers.

Principles and Practices in Education

EDUC 3000 ***3 cr. 3 hr.*** ▲

This course includes an examination of the theoretical and practical knowledge of the teaching/learning process. Students demonstrate competencies in the areas of planning, curriculum design, and evaluation. Focus is placed on the needs and learning styles of the elementary school and middle school child and the instructional strategies used to meet those needs effectively. In addition, classroom management skills and techniques are emphasized. A field experience is an integral part of the course.

Prerequisite: PSY 2210 or PSY 2230.

Teaching Mathematics

EDUC 3020 ***3 cr. 3 hr.*** ▲

Contemporary elementary and middle school mathematics standards, methods, and materials are examined in this course. Developmentally appropriate lessons and learning devices are refined and demonstrated.

Reading in Education

EDUC 3030 ***3 cr. 3 hr.*** ▲

This course includes an examination of the reading process with emphasis on methods of evaluation and strategies for reading. Reading skills and procedures for developing these skills are examined, and current approaches to the teaching of reading are evaluated. The student is made cognizant of methods of grouping and evaluation procedures. A pre-practicum is required.

Prerequisites: PSY 2210, EDUC 3000.

Foundations Seminar

EDUC 4010 ***3 cr. 3 hr.*** ▲

This course covers an examination of the historical perspectives and philosophical orientation in the field of elementary and middle school education. Specific attention is given to an analysis of current issues and programs in social foundation, legal foundation, curricular patterns, and pluralism in Education. Practicum experiences are required.

Requirement: taken concurrently with the Practicum.

Reading Diagnosis and Remediation

EDUC 3050 ***3 cr. 3 hr.*** ▲

This course provides students with the competencies necessary to diagnose reading abilities and to develop reading proficiency in their future classrooms. Students are taught the skills needed to administer, score, and analyze Informal Reading Inventories. The student tests a child, plans a program of instruction for that child, and instructs the child based on the diagnosis and instructional plan. Emphasis is also placed on the development and utilization of assessment strategies, instructional techniques, and instructional activities specific to the needs and interests of the child.

Prerequisites: EDUC 2100 and EDUC 3030.

Methods and Materials in Early Childhood Education

****EDUC 3060*** ***3 cr. 3 hr.*** ▲

This course includes a hands-on workshop and exploration of all areas of the early childhood curriculum. As part of the exploration, students research and prepare games and devices appropriate to an early childhood classroom. This course serves as an elective for all education majors.

Science, Math, and Social Studies in Early Childhood Education

EDUC 3100 ***4 cr. 5 hr.*** ▲

This course emphasizes the development and demonstration of instructional techniques and materials in science, math, and social studies, which are appropriate for heterogeneous groups of young children.

Behavioral Science in Early Childhood II: Learning and Assessment

EDUC 3110 ***4 cr. 5 hr.*** ▲

This course is a continuation of EDUC 2110. (EDUC 2110 and EDUC 3110 cannot be taken simultaneously.)

Middle School Concept

****EDUC 3200*** ***3 cr. 3 hr.*** ▲

This course introduces students to the historical development, philosophy, and the competencies needed to teach in the Middle School. Pre-practicum required.

Prerequisite: PSY 2210 or PSY 2230.

Curriculum and Instruction in the Middle School

****EDUC 3300*** ***3 cr. 3 hr.*** ▲

This course introduces students to curriculum development, instructional competencies, and appropriate goals and objectives for the Middle School.

Prerequisites: PSY 2210 or PSY 2230 and Middle School Concept.

Reading in the Middle School

****EDUC 3400*** ***3 cr. 3 hr.*** ▲

This course imparts appropriate knowledge and competencies for reading at the Middle School level.

Creative Arts in Education

EDUC 3500 ***3 cr. 3 hr.*** ▲

The course explores materials and processes of children's perception and behavior with emphasis aimed at encouraging the development of their critical and creative potential.

Requirement: taken concurrently with the Practicum.

Social Studies in Education

EDUC 3600 ***3 cr. 3 hr.*** ▲

This course equips the future teacher with the knowledge, teaching strategies, and sequential course development necessary to teach Social Studies at the elementary and middle school level.

Prerequisite: EDUC 3000 or EDUC 3200.

Reading in the Content Areas

****EDUC 3640*** ***3 cr. 3 hr.*** ▲

This course includes an investigation of the reading process, a discussion of current evaluative methods, an analysis of reading strategies, and procedures for development.

Using Computers in Classrooms

EDUC 3700 ***3 cr. 3 hr.*** ▲

Students examine the philosophy, theory, and application of computers in classrooms. A significant portion of class time is devoted to "hands on" experiences with Macintosh computers. These experiences include programming in text and graphics mode, introducing and using LOGO, using printers, developing programs designed to enhance the learning abilities of children, and evaluating educational software. Prior experience using computers is not assumed.

Analysis of Reading Problems

EDUC 4000 ***3 cr. 3 hr.*** ▲

The course examines the correlates of reading problems. Students learn to identify principles of diagnosis, and analyze, administer, and interpret formal diagnostic tests. Students demonstrate competency in preparing a case study report.

Prerequisite: EDUC 2100 or EDUC 3030.

Senior Seminar in Early Childhood

EDUC 4050 ***4 cr. 5 hr.*** ▲

This course covers an examination of the historical perspectives and philosophical orientations in the field of early childhood education. Specific attention is given to an analysis of current issues and programs.

Requirement: taken concurrently with student teaching. Practicum experiences will be required. Required of Early Childhood majors.

Language Arts in Education

EDUC 4100 ***3 cr. 3 hr.*** ▲

This course provides students with an introduction to the nature of language and language growth. Emphasis is placed on the meaning and importance of language arts as well as on the characteristics of elementary and middle school age children, which affect and are affected by the language arts program. Elements of writing, speaking, listening, and reading are stressed. A field experience is an integral part of the course.

Prerequisite: EDUC 3000 or EDUC 3200.

Introduction to Learning Disabilities

****EDUC 4780*** ***3 cr. 3 hr.*** ▲

This course includes a study of some of the causes of school learning disabilities at the Elementary level. Specific techniques and remediation exercises are discussed.

Practicum I and II in Early Childhood Education

EDUC 4862, 4863 ***4 cr.*** ▲

For the Student Teaching Practicum in Early Childhood, students are assigned to cooperating schools for a semester of student teaching.

Practicum in Elementary Education I and II

EDUC 4882, 4883 ***4 cr.*** ▲

Students are assigned to cooperating elementary schools for a semester of student teaching.

Practicum in Middle School Education I and II

EDUC 4885, 4886 ***4 cr.*** ▲

Students are assigned to cooperating middle schools for a semester of student teaching.

Independent Study in Education

EDUC 4903 ***3 cr.*** ▲

This course provides students in early childhood, elementary, and secondary education with the opportunity to do research with staff guidance in a problem in education. The course is limited to juniors and seniors.

Prerequisite: permission of Department.

Topics in Education

EDUC 5000 ***3 cr. 3 hr.*** ▲

Courses having a more narrow focus or those taught on an irregular basis may be offered under the heading "Topics". New courses may also be taught on an experimental basis under this title.

Theories of Language and Second Language Acquisition

EDUC 5200 ***3 cr. 3 hr.***

The course introduces current theoretical models of language acquisition focusing on literacy development and developing language skills. It is designed to provide students with an overall understanding of the importance of language development and language acquisition as seen in the education environment. Issues regarding first and second language development will be addressed. Students will focus on how theory and research relate to language instruction.

Bilingual Teaching Methods and Strategies

EDUC 5300 ***3 cr. 3 hr.***

This course introduces students to the various theories and methods of teaching children from diverse linguistic backgrounds. The emphasis will be placed on approaches and methodologies in teaching both English and the child's native language. Teaching strategies for supporting language skills, assessment approaches and evaluation procedures to determine the needs of bilingual students will be provided. Children with diverse learning abilities within the bilingual setting will also be emphasized.

Assessment and Evaluation of Bilingual Programs

EDUC 5400 ***3 cr. 3 hr.***

This course is designed to explore the assessment and evaluation systems in bilingual education programs. The focus will be on the federal, state, and local educational policies and assessment practices of students in terms of language acquisition, language skills, content knowledge, as well as the evaluation of curriculum materials and teaching methods. Student progress, monitoring, developing and designing authentic assessment approaches, creating portfolios, as well as previewing, analyzing, and evaluating current bilingual assessment instruments will be included.

Bilingual Practicum

EDUC 5500 ***3 cr. 3 hr.***

The practicum is designed for student teachers preparing for their certification, Teacher of Transitional Bilingual Education, Elementary Provisional with Advanced Standing. The students will be placed in bilingual classrooms at various grade levels (K-third grade) where they will be observing, assisting, and teaching under the supervision of a cooperating teacher. The student will also be attending, with university supervisor regularly scheduled seminars (see Bilingual seminar) in which both Spanish and English will be presented.

Bilingual Seminar

EDUC 5600 ***1 cr. 1 hr.***

The Bilingual Seminar is a complement and supplement to the Student Teaching Practicum in the bilingual classroom setting. Students will investigate the diversity of bilingual classroom settings, learning environments, curriculum approaches, teaching methodologies and teaching strategies as they relate to the bilingual child. Observation, journal writing and curriculum presentations and evaluations will be required.

Economics

Key to Course Offerings

Q: designates courses in the Quantitative Scientific Cluster

I: the Ideas and Events Cluster

B: the Human Behavior Cluster

L: the Literature, Language and Arts Cluster

C: Multicultural

IDIS: Interdisciplinary courses

Multicultural and interdisciplinary courses also fulfill a cluster designation.

* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

Principles of Economics: Macroeconomics

ECON 1000 ***3 cr. 3 hr.*** ▲ ●

This course is a study of the theory of employment, income, and growth. Stabilization policy and current problems in American capitalism are emphasized. I

Prerequisite: satisfactory completion of the College Mathematical Readiness requirement.

Principles of Economics: Microeconomics

ECON 1200 ***3 cr. 3 hr.*** ▲ ●

Students examine the theory of the consumer and the business firm in this course. Efficiency in the allocation of resources is examined in four different market structures: pure competition, pure monopoly, monopolistic competition, and oligopoly. I

Prerequisite: satisfactory completion of the College Math Readiness requirement.

Introduction to the U.S. in the World Economy

ECON 1250 ***3 cr. 3 hr.*** ▲

This course is an introduction to economics course for non-majors. It surveys the field of economics without the technical sophistication of a principles course. The focus is on the real problems of competition and growth of the U.S. in the world economy. I

Consumer Economics

ECON 1300 ***3 cr. 3 hr.*** ▲

This course emphasizes theories of consumption and economic functioning with emphasis on demand, consumer problems, standards of living, policies for protecting consumers, and expanding consumption. I

Comparative Economic Systems

ECON 2200 ***3 cr. 3 hr.*** ▲

This course studies the different economic systems operational in the world today. Emphasis is on differences between the various types of market capitalist and planning systems.

Prerequisite: ECON 1000.

Industrial Organization

ECON 2300 ***3 cr. 3 hr.*** ▲

This course integrates theory, empirical studies, and case studies to analyze the effects of government regulations on the structure and organization of US business firms. Several cases of antitrust legislation are studied. In addition the course shows how political and economic issues affect industrial organization. I

Prerequisites: satisfactory completion of the College Mathematical Readiness requirement and ECON 1200.

Money and Banking

ECON 2400 ***3 cr. 3 hr.*** ▲ ●

This course focuses on the role of money, credit, and banking in the American economy. Special emphasis is placed on the applicability of monetary policy to the problems of economic stability. I

Prerequisite: ECON 1000.

Human Resource Economics

ECON 2450 ***3 cr. 3 hr.*** ▲

Labor market and employment analysis are the focus of this course, which covers the structure of labor markets, the education and training of the labor force, and manpower programs. The serious problems of unemployment, underemployment, discrimination, and barriers to job entry are also discussed.

Prerequisites: satisfactory completion of the College Mathematical Readiness requirement and ECON 1200 or ECON 1250.

Economic Development

ECON 2500 ***3 cr. 3 hr.*** ▲

This course examines the problems of less developed countries. Topics of discussion include population, income growth, capital formation, unemployment, foreign investment and aid, the role of government, and international economics. I, C

Prerequisite: ECON 1000.

Urban Economics

ECON 2550 ***3 cr. 3 hr.*** ▲

This course is a historical and economic explanation of the growth of cities as well as a theoretical analysis of their location, form, and economic structure. Current urban problems are also discussed.

Prerequisites: ECON 1000, ECON 1200 or ECON 1250.

Public Finance

ECON 2600 ***3 cr. 3 hr.*** ▲

This course studies the principle of governmental expenditures and revenues. Attention is also devoted to the problems of public debt, fiscal policy, and intergovernmental fiscal relations particularly in reference to the United States. I

Prerequisites: satisfactory completion of the College Mathematical Readiness requirement and ECON 1200.

History of Economic Thought

ECON 3000 ***3 cr. 3 hr.*** ▲

Within the framework of understanding the relationship between history and economic thought, this course covers the work of the great economists. Starting with the roots of economic thought in the works of the mercantilists and physiocrats, the course turns to the giants in political economy, including Adam Smith, David Ricardo, Karl Marx, Alfred Marshall, and J. M. Keynes.

Prerequisites: ECON 1000 and ECON 1200.

International Economics

ECON 3550 ***3 cr. 3 hr.*** ▲

This course explores the theories of international trade and finance and their links to theories of economic development and growth. Major current topics in the international economy, including economic competition among countries, debt problems in the Third World, and North-South relations, are treated as practical issues against which the theories can be tested. I

Prerequisites: ECON 1000, ECON 1200.

Intermediate Macroeconomics

ECON 3650 ***3 cr. 3 hr.*** ▲

As a second course and more advanced treatment of macroeconomics, this course provides a detailed examination of major topics in macroeconomics. Topics of discussion include theories of consumption, investment, and growth recession, as well as efforts by the government to stabilize the economy through fiscal, monetary, or other measures. This course introduces the Keynesian, neo-classical, and Marxian models of the macroeconomy. I

Prerequisites: ECON 1000, ECON 1200.

Intermediate Microeconomics

ECON 3660 ***3 cr. 3 hr.*** ▲

This course analyzes consumer and producer equilibrium in a market economy. The behavior of firms in the four market structures and the behavior of firms and individuals in input markets is examined. Applications of economic theory to concrete economic problems are emphasized. I

Prerequisites: satisfactory completion of the College Mathematical Readiness requirement, ECON 1200.

Econometrics

ECON 3700 ***3 cr. 3 hr.*** ▲

This course is an introduction to econometric methods, statistical inferences, and testing hypotheses. Model building techniques and their theoretical justifications are presented and evaluated in terms of their performance. Q

Prerequisites: ECON 1000, ECON 1200, MATH 2200, MATH 2800 or permission of Instructor.

Managerial Economics

ECON 3750 ***3 cr. 3 hr.*** ▲

Applied microeconomics or the application of economic theory and methodology to the practice of managerial decision making is the focus of this course. Case studies are emphasized in instruction. I

Prerequisites: ECON 1000, ECON 1200, MATH 2200, MATH 2800 or permission of Instructor.

Independent Study in Economics

ECON 4900 ***3 cr. 3 hr.*** ▲

The Independent Study is open to students who have the permission of the supervising instructor and the department. Course of study, meetings, and credit are arranged with approval.

Internship in Economics

ECON 4940 ***12 cr. 3 hr.*** ▲

The Internship provides work experiences in private or public firms. Students acquire skills useful to professional economists.

Prerequisites: junior or senior standing, 3.00 Econ. cum, or permission of internship coordinator.

Topics in Economics

ECON 5000 ***3 cr. 3 hr.*** ▲

Courses having a more narrow focus or those taught on an irregular basis may be offered under the "Topics" heading. New courses may also be taught on an experimental basis under this title.

English

Key to Course Offerings

Q: designates courses in the Quantitative Scientific Cluster

I: the Ideas and Events Cluster

B: the Human Behavior Cluster

L: the Literature, Language and Arts Cluster

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▲ Undergraduate Day School

● Undergraduate Evening School

Basic College Writing

ENGL 0100 ***3 inst. cr. 3 hr.*** ▲

This course studies the process of writing as well as sentence arrangements and punctuation patterns in Edited American English. The course includes a Writing Skills Center tutorial program.

Writing Skills Workshop

ENGL 1000 ***1 cr. 3 hr.*** ▲

An intensive study of the basic writing skills. This course cannot be taken simultaneously with Basic College Writing (ENGL 0100), Writing I or II (ENGL 1100, 1200). The class may be taken 3 times for 1 credit per semester.

Writing I

ENGL 1100 ***3 cr. 3 hr.*** ▲ ●

This course explores writing as process and product. Practice, both oral and written, in expressing ideas with precision, clarity, and economy is emphasized. A researched essay and critical reading are required.

Writing II

ENGL 1200 ***3 cr. 3 hr.*** ▲ ●

This course is a continuation of ENGL 1100 with an emphasis on writing as a thinking and learning process. Careful reading, critical and creative thinking, and writing, using analysis and synthesis, is promoted with the assignment of nine papers on a range of subjects. Course options incorporate various styles and formats related to different situations and audiences.

Prerequisite: a passing grade in ENGL 1100. Prerequisite for all English electives: Writing I and II (ENGL 1100, 1200).

Approaches to English Studies

ENGL 1999 *3 cr. 3 hr.* ▲

An introduction to the academic study of English and the different ways readers can connect to, think about, and experience literature. The course provides an overview of the discipline's issues and theories and gives students experience in writing practical criticism and using research tools and methods. L

American Literature I

ENGL 2000 *3 cr. 3 hr.* ▲ ●

This course examines representative texts from the age of exploration through the American Civil War. L

American Literature II

ENGL 2100 *3 cr. 3 hr.* ▲ ●

This course examines representative texts and their contexts since the Civil War. L

English Literature I

ENGL 2200 *3 cr. 3 hr.* ▲ ●

This course covers British writers from the Old English period through the 16th Century. L

English Literature II

ENGL 2210 *3 cr. 3 hr.* ▲

This course covers British writers of the 17th and 18th Century. L

English Literature III

ENGL 2220 *3 cr. 3 hr.* ▲

This course covers British writers from the Romantic period to the present day. L

Literature and Disability

****ENGL 2300*** *3 cr. 3 hr.* ▲ ●

Through fiction, biography, and autobiography, this course examines images of disability as presented in literature. L, IDIS

Script Writing

ENGL 2320 *3 cr. 3 hr.* ▲

This basic course in script writing for film, television, and multi-image productions includes information on the preparation of proposals, treatments, storyboards, and scripts. Script formats include documentary, educational, corporate, and dramatic film/video writing. (See also COMM 2320.)

Literature and Film

ENGL 2330 *3 cr. 3 hr.* ▲

This course involves the critical study of literature and film as means to convey narratives and stories. The conventions of various literary genres and types of films will be considered. Special attention will be paid to the adaptation of novels and stories for the screen. Students will study a dozen or more motion pictures in depth and compose six to eight critical essays. L, IDIS

World Literature I

ENGL 2400 *3 cr. 3 hr.* ▲ ●

This course examines masterpieces through the middle of the 17th century. L, C

World Literature II

ENGL 2500 *3 cr. 3 hr.* ▲ ●

This course examines masterpieces from the mid-17th century to the present. L, C

The Bible as Literature

ENGL 2600 *3 cr. 3 hr.* ▲ ●

The course examines the style, narrative techniques, symbols, and historical setting of the Old and New Testament writers. L, C

Classical Mythology

ENGL 2620 *3 cr. 3 hr.* ▲ ●

This course examines pre-Homeric stirrings of symbol and story then moves on to study Virgil and Ovid and Roman traditions. L, C

Other Voices

ENGL 2650 *3 cr. 3 hr.* ▲

In a workshop approach this course presents works by significant ethnic writers, such as James Farrell, Maxine Hong Kingston, Abram Tertz, Zora Neale Hurston, Leslie Marman Silko. L, C

20th Century African-American Literature

ENGL 2670 *3 cr. 3 hr.* ▲ ●

This course is an introduction to the literature, thought and literary practice of African-American writers from the turn of the century to the present.

The Short Story

ENGL 2700 *3 cr. 3 hr.* ▲ ●

Significant stories by some of the world's great writers are read and analyzed to show the evolution of the short story form. L

Poetry and Self-Identity

ENGL 2720 *3 cr. 3 hr.* ▲

Students read, write, edit, and study poetry about self-identity—who we are and how we establish ourselves in relation to our ethnic, racial, and cultural experiences. This poetry workshop teaches students to express themselves through poetry and examines autobiographical poems by authors such as Lucille Clifton, Li-Young Lee, Joy Harjo, Rita Dove, Leslie Marmon Silko, Michael Harper, and Cathy Song. L, C

Detective Fiction

ENGL 2750 *3 cr. 3 hr.* ▲ ●

The mystery novel/crime story genre is explored through a range of authors and time periods, including stories from Poe to Conan Doyle, classic British fiction, its distinctively American counterparts to significant contemporary work. L

Journalism

ENGL 2800 *3 cr. 3 hr.* ▲

This course studies the press through individualized writing assignments. Emphasis is placed on ethics in news treatment of contemporary issues and structuring the news story.

Editing and Publishing

****ENGL 2810*** *3 cr. 3 hr.* ▲

This class explores the mechanics of editing, issues of attribution, use of sources, balanced coverage and libel laws. In addition, the relationship between editor and writer with reference to agents, the submission and selection process, and collaborating is explored. Students also gain an understanding of writing for special markets, such as education or medicine, and getting a track record.

Introduction to Secondary School Teaching

ENGL 2860 *3 cr. 3 hr.* ▲

In this course students become familiar with the complexities and demands of secondary school teaching. The course gives faculty the opportunity to screen students and students the opportunity to test their commitment to teaching. The course includes a pre-practicum requirement and is a prerequisite for other certification course requirements. The class is required of all students entering a provisional certification program at the secondary level. It is a sophomore-level course for full-time undergraduates, and the first course for transfer and certification-only students.

Children's Literature
ENGL 2900 *3 cr. 3 hr.* ▲ ●
The course serves as an introductory survey of both classic and contemporary children's literature. Texts are studied from a variety of perspectives in the contexts of both childhood and society. L

Literature for Young Adults
ENGL 2910 *3 cr. 3 hr.* ▲ ●
This course requires reading from a wide sample of recent literature written specifically for the teenager, including problem novels, historical novels, science fiction, fantasy, plays, and poetry. L

Survey of English Grammar
ENGL 2950 *1 cr. 1 hr.* ▲
The course studies traditional and transformational systems of English grammar as a basis for understanding conventions of English usage.

World Drama
ENGL 3000 *3 cr. 3 hr.* ▲
The course examines significant and representative plays from the beginning to the modern period. L, C

Modern Drama
ENGL 3020 *3 cr. 3 hr.* ▲
The course examines the works of such playwrights as Ibsen, Chekhov, Sartre, Brecht, Ionesco, Beckett, and Pinter. L

The Middle Ages
ENGL 3030 *3 cr. 3 hr.* ▲
The course examines literature of the British Isles and Europe to 1500. L

The World Novel to 1914
ENGL 3100 *3 cr. 3 hr.* ▲
The course investigates significant novels representing various countries and periods as well as stages in the development of this literary form. L, C

The World Novel Since 1914
ENGL 3110 *3 cr. 3 hr.* ▲
Modern novels are studied both as aesthetic artifacts and as human documents. L, C

Major American Writers of the 20th Century
ENGL 3210 *3 cr. 3 hr.* ▲
The varied creativity of American writers is explored through the study of fiction, drama, poetry, criticism, and the essay since World War I. L

American Novel to 1950
****ENGL 3220*** *3 cr. 3 hr.* ▲
This course provides a close examination of several representative works by major American novelists of this period. L

Women and Literature
ENGL 3300 *3 cr. 3 hr.* ▲
Literature by and about women is examined in light of their roles in society, at work, and in relationships. L

Technical Documentation
ENGL 3470 *3 cr. 3 hr.* ▲ ●
This course gives students the opportunity to study and write the basic forms of technical documentation found in business and industry, including end-user manuals and training guides. Examination of graphics, typography, and desktop publishing is considered as they apply to hardcopy production.
(See also COMM 3470.)

Creative Writing
ENGL 3800 *3 cr. 3 hr.* ▲ ●
Students write and edit fiction and poetry in a workshop setting. Junior standing or approval of the Instructor is required to enroll in this class.

Journalism Practicum: I and II
ENGL 3810 and 3820 *3 cr. 3 hr.* ▲
This Practicum is open to members of the Strobe staff and other students engaged in appropriate on-campus or off-campus journalistic activities. (P1 and P2 may be taken separately for a total of 6 credits).
Prerequisite: Journalism.

The American Magazine
****ENGL 3840*** *3 cr. 3 hr.* ▲
This course provides a close study of significant American magazines with emphasis on the editorial policies and requirements, audience slant, advertisements, and visual layouts.

Writing for Business and Technology
ENGL 3860 *3 cr. 3 hr.* ▲ ●
The course is for students interested in writing in the business, industry, and management context. Topics covered in the class are: business correspondence, description of process and mechanisms, sets of instructions, proposals, abstracts, and reports. (Credit is not given for both ENGL 3860 and COMM 3860.)

Feature and Magazine Writing
ENGL 3870 *3 cr. 3 hr.* ▲
This course explores writing feature articles for newspapers, magazines, and trade journals. (Credit is not given for both ENGL 3870 and COMM 3870.)
Prerequisite: Journalism.

Advanced Expository Writing
ENGL 3890 *3 cr. 3 hr.* ▲
With a focus on nonfiction writing genres, the course investigates the social, linguistic, and rhetorical conventions underlying the creation of traditional forms. Topics of discussion include classical and modern rhetorical theory and related grammatical, linguistic, and philosophical questions.

Chaucer and His World
ENGL 4010 *3 cr. 3 hr.* ▲
This course emphasizes the Canterbury Tales in their medieval context. L

Shakespeare's Drama
ENGL 4020 *3 cr. 3 hr.* ▲
Students read several history plays as well as one comedy and one tragedy from Shakespeare's body of work. Emphasis is placed on Shakespeare's interpretation of political life and leadership. L

Shakespeare's Thought
ENGL 4030 *3 cr. 3 hr.* ▲
The plays of Shakespeare are examined for their psychological, philosophical, and religious meanings. Emphasis is placed on the conception of human destiny in Shakespeare's comedies and tragedies. L

Major English Dramatists of the 17th and 18th Centuries
****ENGL 4040*** *3 cr. 3 hr.* ▲
This course will survey the drama of such writers as Jonson, Webster, Behn, Congreve, Dryden, Gay, and Goldsmith.

The Novel in the 18th Century
ENGL 4050 *3 cr. 3 hr.* ▲
The course studies the origins of the novel in England as it reflects the tastes of a rising middle class. Readings include Defoe, Richardson, Fielding, Burney, Johnson, Austen, Edgeworth, Heywood, and others. L

The Age of Satire: 1700-1750
ENGL 4060 *3 cr. 3 hr.* ▲
The class emphasizes the public and literary responsibilities of the writer and the various ways that humor is used as a weapon for social purposes. Authors include Swift, Pope, Astell, Behn, Collier, and others. L

From Classic to Romantic: 1750-1800

ENGL 4070 ***3 cr. 3 hr.*** ▲

This course explores the revolution in manners, philosophy, science, and gender as reflected in literature, art, and music from the late 18th century. Major genres include drama, poetry, fiction, prose, paintings, and engravings. L

Romanticism

ENGL 4080 ***3 cr. 3 hr.*** ▲

The poetry, prose, and art representative of the political, social, and artistic upheaval called "Romanticism" is considered. Readings include Romanticism's outcasts, alternative voices, and anti Romantic writers. L

The 19th-Century English Novel

ENGL 4090 ***3 cr. 3 hr.*** ▲

Significant novels demonstrating the changing cultural milieu and varying approaches of the genre during this period are examined and discussed. L

The Age of Dickens

ENGL 4095 ***3 cr. 3 hr.*** ▲ ●

Students read and study the works of Dickens—the literary craftsman, the reporter of his age, the social reformer—as a foundation for examining the nineteenth century in prose, poetry, and/or drama. L

Victorian Literature

ENGL 4100 ***3 cr. 3 hr.*** ▲

The individual's relationship to a changing society in the face of nineteenth-century industrialization and scientific progress is studied in the major writers of the period. L

20th-Century Irish Fiction

ENGL 4120 ***3 cr. 3 hr.*** ▲ ●

Irish fiction from James Joyce through Brian Moore, including O'Faolain, O'Connor, O'Flaherty, McGahem, is read and discussed. L, C

20th-Century Irish Drama and Poetry

ENGL 4130 ***3 cr. 3 hr.*** ▲

Irish poets, from Yeats through Montague, Kinsella and Heaney, and Irish playwrights, from Synge and O'Casey through Beckett and Friel are read and discussed. L, C

Modern Poetry

ENGL 4140 ***3 cr. 3 hr.*** ▲ ●

Chief modern poets of America and England are introduced and close reading is encouraged in the lyric form of writers such as Eliot through Lowell, Plath and other end-of-century writers. Emphasis is on these creators as precursors in a tradition. L

Mark Twain and American Humor

ENGL 4150 ***3 cr. 3 hr.*** ▲

This course explores Southwestern humor as it leads up to the writings and career of Mark Twain, and humorists who share the Twain legacy. L

The Romantic Movement in U.S. Literature 1810-1860

****ENGL 4200*** ***3 cr. 3 hr.*** ▲

This course explores concepts of nature, idealism, and community in the works of Hawthorne, Poe, and others. L

American Novel Since World War II

ENGL 4230 ***3 cr. 3 hr.*** ▲

The class provides a close analysis of seven or eight major novels. L

Rags to Riches in a Hostile World

ENGL 4240 ***3 cr. 3 hr.*** ▲

The course examines the Horatio Alger hero in American literature. L

Journalist to Novelist

****ENGL 4260*** ***3 cr. 3 hr.*** ▲

This class explores the stylistic and professional development of distinguished American writers who began their careers as reporters. L

Seminar

ENGL 4400 ***3 cr. 3 hr.*** ▲

The seminar examines topics for literary analysis and research as selected by the instructor. The seminar is required for English majors, students taking a literature track, and others admitted by permission.

Literary Criticism

****ENGL 4500*** ***3 cr. 3 hr.*** ▲

Theories about literature are examined, and their practical application in the classroom and in one's own reading is discussed. Approaches to different forms of literature as well as a survey of changing historical perspectives are also explored.

The Structure and the Nature of Language

ENGL 4600 ***3 cr. 3 hr.*** ▲

This course studies language systems and grammatical theories, including the history of the English language, theories of language acquisition, and psycholinguistic and sociolinguistic topics.

Teaching Writing in Secondary Schools

ENGL 4700 ***3 cr. 3 hr.*** ▲

This course provides practice and research in alternatives for teaching writing in secondary schools. Different approaches are explored through experiments for the teacher and opportunities to test these approaches are available in prepracticum experiences.

Special Methods in English

ENGL 4850 ***3 cr. 3 hr.*** ▲

The methodology of English is explored, including lesson planning, selection of materials, curriculum development, and review of relevant research.

English Practicum in a Secondary School I and II

ENGL 4860, 4870 ***6 cr.*** ▲

In the student teaching practicum students are assigned to cooperating schools for a semester of student teaching.

Independent Study

ENGL 4903 ***3 cr.*** ▲ ●

The Independent Study is for English majors excelling in scholarship and can be taken upon approval of both department chair and advising instructor. Course of study, meetings, and credit are arranged with advisor.

Internship

ENGL 4940, 4950, 4960 ***3, 6, 9 cr.*** ▲

Internship

ENGL 4970 ***12 cr.*** ▲

The Internship provides an opportunity to gain valuable on-the-job experience for college credit by spending one semester (full-time) in business or industry. Students select field placement where they can use their abilities as communicators, learn new skills, and sample a potential job market. The Internship is a recommended component of the English Department Writing Track. Department approval and junior/senior standing required.

Topics

ENGL 5000 ***3 cr. 3 hr.***

This course serves as a vehicle for curriculum experimentation and enrichment. Topics are selected by the instructor, usually from work in progress.

French

Key to Course Offerings

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IDIS: Interdisciplinary courses

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▲ Undergraduate Day School

● Undergraduate Evening School

French for Beginners I

FREN 1000 ***3 cr. 3 hr.*** ▲ ●

The correct pronunciation, reading ability, and fundamentals of grammar and syntax are taught in this class. Over the semester French gradually becomes the working classroom language. The class is designed for students with no language experience or less than two years of French at a high school level.

Note: Students with two or more years of language instruction are not admitted without permission of Instructor. L, C

French for Beginners II

FREN 1100 ***3 cr. 3 hr.*** ▲ ●

This class serves as a continuation of FREN 1000. L, C

Intermediate French I

FREN 2000 ***3 cr. 3 hr.*** ▲

This course includes practice in conversation practice as well as readings stressing life, customs, and culture of France. L, C

Prerequisite: two years of high school, French II and/or permission of Instructor.

Intermediate French II

FREN 2100 ***3 cr. 3 hr.*** ▲

This course serves as a continuation of FREN 2000. L, C

Methods for Teaching French in the Elementary School

****FREN 2400*** ***3 cr. 3 hr.*** ▲

The course provides techniques and materials for use in teaching French at an elementary school level. The course is required for foreign language specialization. A minimum of twelve semester hours of French or its equivalent and Instructor's permission is required to enroll.

French Civilization

FREN 3000 ***3 cr. 3 hr.*** ▲

The course covers the history, geography, fine arts, and literature of the French people from the earliest times through today. Course work includes extensive readings in French. I, L, C, IDIS

Prerequisite: FREN 2100 or permission of Instructor.

French Literature

FREN 3300 ***3 cr. 3 hr.*** ▲

This course will present a cultural, historical and sociological study of France as mirrored in selected works of French writers and thinkers. The time period is from the Medieval ages through and including the 20th century. L

Prerequisite: FREN 2100 or permission of Instructor.

French Conversation and Composition

FREN 3500 ***3 cr. 3 hr.*** ▲

This course is recommended for students who desire greater fluency in speech and writing as well as for students taking civilization and literature courses. L, C

Prerequisite: FREN 2100 or permission of Instructor.

Independent Study

FREN 4901 ***1 cr. 1 hr.*** ▲

Advanced French Independent Study

FREN 4903 ***3 cr. 3 hr.*** ▲

Prerequisite: minimum of 12 semester hours, 2.0 grade-average in French, and permission of Instructor, Department Chairman.

Topics

FREN 5000 ***3 cr. 3 hr.*** ▲

Courses having a more narrow focus or those taught on an irregular basis may be offered under the "Topics" heading. New courses may also be taught on an experimental basis under this title.

General Studies Capstone

GENS 4803, 4805, 4806, 4809, 4812, 4815 ***3-12 cr.***

The culminating course for General Studies major. It can be an internship, a special project, or in independent research program. Course is proposed by the student on a special form provided by the Director of General Studies and approved by the advising committee. The content of this course should demonstrate the integration of the student's fields of study. Contact the Coordinator of General Studies for further instruction.

Geo/Physical Sciences

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▲ Undergraduate Day School

● Undergraduate Evening School

Introduction to Geography

GEOG 1000 **3 cr. 3 hr.** ▲ ●

The course examines the interrelationships between the physical and cultural elements of the human environment. I

Principles of Human Geography

GEOG 1100 **3 cr. 3 hr.** ▲ ●

The course introduces the elements and processes underlying economic, social, and political geographic patterns, with applications to actual case studies and situations. I

Earth, Sea, and Air

GEOG 1300 **3 cr. 4 hr.** ▲ ●

The course is comprised of selected topics from the earth sciences. Laboratory required. Q

Geology

GEOG 2100 **3 cr. 4 hr.** ▲ ●

The course is an introductory survey of the basic elements of physical and historical geology. The class is open to all students. A laboratory is required. GEOG 1000 is strongly suggested. Q

Atmospheres I—Meteorology *

GEOG 2200 **3 cr. 4 hr.** ▲ ●

The fundamental principles of weather systems are introduced. Emphasis is on mid-latitude phenomena and weather forecasting. Topics in tropical meteorology and severe storm phenomena are also discussed. Laboratory is required. Q

Atmospheres II—Climatology

****GEOG 2300*** **3 cr. 4 hr.** ▲

The course explains the regional differentiation of the climatic zones of the major land and ocean areas of the world. Special attention is given to urban climatology and the energy and moisture climatology of the earth.

Prerequisite: GEOG 4000 Meteorology or permission of the Instructor.

Computer Applications in Geography/ Earth Science

GEOG 2400 **3 cr. 3 hr.** ▲ ●

Introduction to four spheres of relevance to the Geosciences: the Internet as a source of data, educational software, computer mapping, and overview of Geographic Information Systems.

Prerequisite: GEOG 1000 and permission of the Instructor.

Oceanography

GEOG 2500 **3 cr. 4 hr.** ▲ ●

The course studies the physical and chemical properties of sea water, atmosphere interaction with the sea surface, and currents and volume flow. In addition the energy budget of the oceans and the submarine geology of the ocean basins are explored. Students participate in a thorough discussion of ocean floor spreading and coastal processes. Laboratory is required. Q

Map Use and Interpretation

GEOG 2800 **3 cr. 3 hr.** ▲ ●

This course considers the nature and role of maps in communicating aspects of the earth's natural and human environments. Skills learned include map reading, relating map symbols to real world features; map analysis, extracting information from maps; and map interpretation.

Introduction to Secondary School Teaching

GEOG 2860 **3 cr. 3 hr.** ▲

This course is required of all students entering a provisional certification program at the secondary level. It is a sophomore level course for full-time undergraduates and the first course taken by transfer and certification only students. Students become familiar with the complexities of secondary school teaching and its demands. The course gives faculty the opportunity to screen students and give students the opportunity to test their commitment to teaching. This course includes a pre-practicum requirement and is a prerequisite for other certification course requirements.

Economic Geography

****GEOG 3000*** **3 cr. 3 hr.** ▲

The course analyzes factors underlying the spatial distribution of primary, secondary, and tertiary economic activities, with emphasis on locational processes in commercial economics. I, C, IDIS

Political Geography

****GEOG 3100*** **3 cr. 3 hr.** ▲

The course examines dependent and independent political units, boundary disputes, strategic areas, buffer zones, and the function of international organizations.

U.S. and Canada

****GEOG 3200*** **3 cr. 3 hr.** ▲ ●

The course includes U.S. and Foreign Area Studies. Students conduct regional and systematic analysis based upon geographic elements influencing domestic evolution and international relations.

Prerequisite: GEOG 1000.

Introduction to Historical Geology

GEOG 3250 **3 cr. 4 hr.** ▲

This course studies the physical history of the earth based on evidence from the rock and fossil records from the early Paleozoic Era through the present. The evolution of life forms, subjective and absolute dating methods, fossil identification, and fossil evidence supporting plate tectonics theory are some of the topics studied. Laboratory is required.

Prerequisite: GEOG 2100 or permission of Instructor.

Common Rocks and Minerals

GEOG 3270 ***3 cr. 4 hr.*** ▲

Major rock and mineral types are studied. Considerable time is spent on field and laboratory identification techniques. Mineral crystal systems and rock and mineral forming processes are also studied. Laboratory is required.
Prerequisite: GEOG 2100.

Population Geography

GEOG 3400 ***3 cr. 3 hr.*** ▲

The course presents selected demographic processes and population characteristics relative to resources in economically underdeveloped countries and regions. Course material provides both a systematic and regional view of world population problems. I

Geographic Information Systems

GEOG 3500 ***3 cr. 3 hr.*** ▲ ●

Characteristics and applications of GIS in a computerized, desktop mapping environment. Focus on gaining competence in the use of one from among several GIS programs, namely, ArcView, Idrisi, or MapInfo.
Prerequisite: GEOG 1000 and permission of the Instructor.

Atmospheres III—Planetary Atmospheres

****GEOG 4110*** ***3 cr. 3 hr.*** ▲

This course seeks to explain the similarities and differences between the earth's atmosphere and the atmospheres of the planets and moons in our solar system. Each atmosphere is studied to determine its chemical composition, thermal structure, energy budget, pressure, wind systems, clouds, precipitation, and other pertinent meteorological phenomena.
Prerequisite: GEOG 4000.

Geomorphology

GEOG 4200 ***3 cr. 4 hr.*** ▲

The course provides a comprehensive study of land forms and their origins. Laboratory is required.
Prerequisite: GEOG 2100, Geology or permission of the Instructor.

Structural Geology

GEOG 4220 ***3 cr. 4 hr.*** ▲

Offered in the fall semester in even years for day students.
This course studies rock structures developed by the application of deformational forces. Topics covered include the elementary concepts of stress and strain and the geometry of joints, faults, folds, foliations and lineations. Q
Prerequisites: GEOG 3270, MATH 1300 or permission of the Instructor.

Urban Geography

****GEOG 4400*** ***3 cr. 3 hr.*** ▲

The course analyzes the external relationships and internal structure of cities. Emphasis is placed on the spatial attributes of contemporary urban qualities and problems in America. Classroom activities are supplemented by applied studies in the greater Fitchburg-Leominster area.

Remote Sensing of the Environment

GEOG 4500 ***3 cr. 4 hr.*** ▲

Techniques in the use of maps, satellite and aerial imagery as applied to landscape analysis and resource management are studied. Laboratory is required.
Prerequisite: GEOG 2100.

Environmental Hydrogeology

GEOG 4600 ***3 cr. 4 hr.*** ▲

A case study approach is used to apply basic principles of geology to environmental problems caused by flooding, groundwater contamination, pollution due to human activity, and landslides, among other topics. Laboratory is required.
Prerequisite: GEOG 2100 or GEOG 4200.

Geographic Perspectives on Conservation

****GEOG 4700*** ***3 cr. 3 hr.*** ▲

The course provides an analysis of natural resources problems arising from changes in technology, population pressure, and concern with the quality of environment.
Prerequisite: GEOG 1000.

Cartography I

GEOG 4800 ***3 cr. 3 hr.*** ▲

The course treats the principal aspects of cartography as a communication process. Taken into consideration are the nature and purpose of mappable information, elements of map design, and methods involved in map construction.

Cartography II

****GEOG 4820*** ***3 cr. 3 hr.*** ▲

Emphasis is on the compilation, layout, and design of maps. Students are involved in the construction of maps using traditional as well as computerized methods.
Prerequisite: GEOG 4800.

Special Methods in Teaching Earth Science

GEOG 4850 ***3 cr. 3 hr.*** ▲

The course reviews lesson planning, selection of materials, curriculum development, and relevant research.
Prerequisites: ENGL 4700 and EDUC 3010.

Earth Science Practicum in a Secondary School I and II

GEOG 4860, 4870 ***12 cr.*** ▲

For the Teaching Practicum in earth science, students are assigned to cooperating schools for a semester of student teaching.

Independent Study in Geography

GEOG 4900 ***1, 2, 3 cr.*** ▲ ●

The Independent Study provides exceptional students with the opportunity to do research with faculty guidance in a subject or problems of geographic significance.
Prerequisites: 12 hrs. of Geography and permission of Instructor. Hours and credit by arrangement.

Internship in Geography

GEOG 4940, 4950, 4960 ***3, 6, 12 cr.*** ▲

The Internship provides work experiences in private and governmental concerns. Assignments depend on the needs of the participating agency and interests and vocational objectives of the student.
Prerequisites: junior or senior standing and permission of Internship Coordinator.

Topics in Geography

GEOG 5000 ***3 cr. 3 hr.*** ▲ ●

Courses having a more narrow focus or those taught on an irregular basis may be offered under the "Topics" heading. New courses may also be taught on an experimental basis under this title.

German

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▲ Undergraduate Day School

● Undergraduate Evening School

German for Beginners I

GER 1000 ***3 cr. 3 hr.*** ▲ ●

The correct pronunciation, reading ability, and fundamentals of grammar and syntax are taught in this class. Over the semester German gradually becomes the working classroom language. Student use German language films, cassettes, and Apfeldeutsch, a computer course for German, as part of their instruction. Students with two or more years of German are not admitted without permission of the Instructor. L, C

German for Beginners II

GER 1100 3 cr. 3 hr. ▲ ●

This class is a continuation of GER 1000. L, C

Intermediate German I

GER 2000 ***3 cr. 3 hr.*** ▲

This course includes practice in conversation as well as readings stressing life, customs, and culture of Germany. L, C

Prerequisites: two years of high school German or GER 1000 and GER 1100.

Intermediate German II

GER 2100 ***3 cr. 3 hr.*** ▲

This class is a continuation of GER 2000. L, C

Modern German Literature in Translation

****GER 2800*** ***3 cr. 3 hr.*** ▲

The course introduces the varied creativity of German writers of fiction, drama, and poetry of the 20th century. The German film contribution of the 1920's with feature-length films is included. Readings are in translation and the course is conducted in English.

Modern German Culture: "The Road to Hitler"

****GER 2900*** ***3 cr. 3 hr.*** ▲

The course examines the cultural factors in music, art, literature, and film, which illuminate the events leading to National Socialism. Readings focus on translated materials, especially in literature, which help to explain why the Germans embraced Adolph Hitler. The class includes a significant audio-visual component and is given in English. I

German Conversation and Composition

****GER 3500*** ***3 cr. 3 hr.*** ▲

This course is designed to increase the student's ability to write and speak German. Students are expected to write compositions on topics developed orally in class.

Prerequisite: GER 2100 or permission of Instructor.

Independent Study in German

GER 4901 ***1 cr. 1 hr.*** ▲ ●

Independent Study in German

GER 4903 ***3 cr. 3 hr.*** ▲ ●

The Independent Study is open to students studying German with the permission of the supervising Instructor and the Department Chairman. Meeting times and credit are arranged with approval.

Topics in German

GER 5000 ***3 cr. 3 hr.*** ▲

Courses having a more narrow focus or those taught on an irregular basis may be offered under the "Topics" heading. New courses may also be taught in an experimental basis under this title.

Graphics

Key to Course Offerings

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▲ Undergraduate Day School

● Undergraduate Evening School

Interdisciplinary Graphics Seminar

▲

Through lectures, presentations by speakers, and projects, students study advanced topics in graphics. The topics are chosen to emphasize state-of-the-art technologies in graphics. The course is administered by faculty from the Graphics Center and the material varies from semester to semester to meet the needs and interests of the participants.

History

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● Undergraduate Evening School

World Civilizations I

HIST 1000 ***3 cr. 3 hr.*** ▲ ●

This course covers the beginnings of humanity to 1350. It investigates ancient empires and the development of the great world religions. The interdependence of Eurasia is stressed while the independent existence of the Amerindian and African empires is also explored. I, C

World Civilizations II

HIST 1100 ***3 cr. 3 hr.*** ▲ ●

This course investigates the period 1350-1815. The rise of Europe, the resurgence of Islam, the alteration of the Americas, and the continued independent existence of Asiatic and African empires is studied. Additional emphasis is placed on worldwide interdependence. I, C

World Civilizations III

HIST 1150 ***3 cr. 3 hr.*** ▲

This course studies the major wars as well as the social, economic, and political changes in the world from 1815 to the present. Major themes covered are nationalism, global interdependence, and the effects of technology upon peoples. I, C

United States History I

HIST 1400 ***3 cr. 3 hr.*** ▲ ●

The course is a survey of United States History beginning with colonial times and continuing through the era of Reconstruction following the Civil War. I

United States History II

HIST 1500 ***3 cr. 3 hr.*** ▲ ●

The course is a survey of the United States from 1877 to the present. I

Note: All history courses at or above the 2000 level have as a prerequisite, Writing II (ENGL 1200)

Early Christianity and Judaism

HIST 2050 ***3 cr. 3 hr.*** ▲

The course is a survey of major cultures of the Mid East that shaped the history of Judaism and Christianity in period 300-500 AD Focus is on the life ways of different groups using archaeological and literary records. I

Twentieth-Century Europe

HIST 2100 ***3 cr. 3 hr.*** ▲

This course studies culture, science, and social developments as well as domestic and international politics from the first World War to the present. I

Twentieth-Century Germany

HIST 2150 ***3 cr./ 3 hr.*** ▲

This course surveys the history of modern Germany from the origins of the Weimar Republic and National Socialism through German reunification. I

Holocaust

HIST 2160 ***3 cr. 3 hr.*** ▲

This course surveys the Holocaust, examining the experience of victims, perpetrators "bystanders," and survivors. I

British History to 1688

HIST 2200 ***3 cr. 3 hr.*** ▲

The course studies the development of English government and culture from the earliest times to the Glorious Revolution of 1688. I

British History Since 1688

HIST 2250 ***3 cr. 3 hr.*** ▲

The course studies the industrial and agricultural revolutions as well as the evolution of the British Empire and Commonwealth. The position of Britain in the world today is also discussed. I

African-American History

HIST 2300 ***3 cr. 3 hr.*** ▲

The course is an investigation of the historical development of the black man in the United States from his West African origins to the present. Emphasis is placed on the role the black population played in the economic, political, and social life of the United States. I, C

Eastern Amerindian History

HIST 2370 ***3 cr. 3 hr.*** ▲

This course includes the study of major cultures of Amerindians of Eastern North America and Caribbean from prehistoric times through contacts with European colonizers. Course work includes the use of archaeological, anthropological, literary, and historical records. I, C

Western Amerindian History

HIST 2380 ***3 cr. 3 hr.*** ▲

The course studies the major cultures of Amerindians West of Mississippi River and Meso America from prehistoric times through contacts with European colonizers. Course work includes the use of archaeological, anthropological, literary, and historical records. I, C

Massachusetts History

HIST 2400 ***3 cr. 3 hr.*** ▲

The course studies the political, social, and economic trends of the Bay State from Plymouth Rock to the Kennedy clan. I

Women in U.S. History to 1870

HIST 2490 ***3 cr. 3 hr.*** ▲

The course is a multicultural examination of women of all roles and classes in the pre-colonial era through 1870. The "lady and the mill-girl" polarity in the antebellum era, the emergence of the women's rights movement, and women in Victorian culture are covered. I, C

Women in U.S. History: 1870 to the Present

HIST 2500 ***3 cr. 3 hr.*** ▲

The course studies women in America, including the struggle against discrimination and for the ballot as well as the history of various women's groups. Emphasis is placed on women of all roles, classes, and ethnicity. I, C

African-American Women's History

HIST 2520 ***3 cr. 3 hr.***

A study of African-American women's history from slavery through the Civil Rights Movement (1860–1964), this course focuses on the effects of race, class and gender on the interactions of these women among themselves, as well as interactions with white women and men and African-American men.

U.S. Military Experience

HIST 2600 ***3 cr. 3 hr.*** ▲

The class surveys the American wars from the Revolution until today. Course work stresses the changing roles of infantry, cavalry, and artillery over time and also examines the concept of national security at various historical times and under varying conditions. I

Mexico, Central America, and Caribbean History

HIST 2700 ***3 cr. 3 hr.*** ▲

Both HIST 2700 and 2750 survey pre-Columbian and Colonial backgrounds. The clash and fusion of cultures and the evolution of today's Latin American civilizations as they relate to specific geographical areas is covered. I, C, IDIS

South American History

HIST 2750 ***3 cr. 3 hr.*** ▲

See HST 2700. I, C, IDIS

Far East before 1800

HIST 2800 ***3 cr. 3 hr.*** ▲

The class examines the development of Chinese, Japanese, Korean, and South East Asian Civilization from the earliest time until the middle 19th century period. Political, military, and economic background is covered, but special emphasis is placed on cultural history. I, C

Modern Far East

HIST 2850 ***3 hr. 3 cr.*** ▲

The class covers the development of Chinese, Japanese, Korean, and South East Asian Civilizations from 19th century to the present. I, C

Introduction to Secondary School Teaching

HIST 2860 ***3 cr. 3 hr.*** ▲

This course is required of all students entering a provisional certification program at the secondary level. It is a sophomore level course for full-time undergraduates and the first course taken by transfer and certification-only students. Students become familiar with the complexities of secondary school teaching and its demands. The course gives faculty the opportunity to screen students and give students the opportunity to test their commitment to teaching. This course includes a pre-practicum requirement and is a prerequisite for other certification course requirements.

Middle East History to 1500

HIST 2900 ***3 cr. 3 hr.*** ▲

The course covers cultural, religious, military, and women's history as it relates to Ancient Middle East, rise of Islam, Umayyad and Abbasaid dynasties, and the Crusades. I, C

Middle East History Since 1500

HIST 2920 ***3 cr. 3 hr.*** ▲

The course covers political, cultural, religious, and military history of the Modern nation states of Middle East. The rise and fall of the Ottoman Empire is also covered. I, C

Modern African History

HIST 2930 ***3 cr. 3 hr.***

A survey of 19th and 20th century African history, this course investigates the slave trade, imperialism, development and the rise of African nationalisms.

Irish History to 1850

HIST 3100 ***3 cr. 3 hr.*** ▲

Irish History is studied through significant events such as the Rebellion of 1798, the Act of Union, O'Connell, and Catholic emancipation, the rise of Irish nationalism, and the great famine of 1845–50. I

Irish History, 1850 to the Present

****HIST 3150*** ***3 cr. 3 hr.*** ▲

The course examines the Home Rule movement, Parnell and the land league, the Celtic revival, the rebellion of 1916, and the civil war. The Republic of Ireland and Ulster in the twentieth century is also covered. I

India Since 1500

HIST 3200 ***3 cr. 3 hr.*** ▲

This course discusses the political and cultural legacies of the Mughals, the British, and the nationalist movement. It addresses the contributions of Islamic and European rulers and the dramatic social and economic changes that were set in motion from the sixteenth century. I

Modern Russia

HIST 3300 ***3 cr. 3 hr.*** ▲

The class is an intermediate level survey of the major cultural and political forces, which have shaped the modern Russian state. The course traces the development of Russia from its origins in 10th century Kiev, through the Mongol period, and culminates with an overview of Russian political, cultural, and intellectual history up to the 1917 revolution. I, C

20th-Century Russia

HIST 3350 ***3 cr. 3 hr.*** ▲

This class is an intermediate level survey of 20th century Russian history from 1917 to the revolutionary developments of the Gorbachev era. Emphasis is placed on the events and forces that led to the Russian Revolution in 1917, the establishment of the Soviet Government, the role and character of the Communist party, the Khruschev era, and concludes with the "2nd Russian Revolution." I, C

The Age of Revolutions

****HIST 3400*** ***3 cr. 3 hr.*** ▲

The class covers the major political, social, and cultural developments in France, England, and the United States during the age of the American, French, and Industrial Revolutions, 1763-1848. The meaning and applicability of the term "revolution" is examined, and there are a series of case studies in topics such as art and politics, romanticism, and the religious revival in England.

Women in European History Since 1700

****HIST 3450*** ***3 cr. 3 hr.*** ▲

This is an advanced course in European Women's History beginning in 1700 with the changes leading to the French Revolution and continuing to today with the new revolutionary changes in Eastern Europe. The effects of historical events and policies on the lives of French, British, Irish, Jewish, German, Spanish, Italian, and Russian Women is examined. I

American Colonial History

HIST 3500 ***3 cr. 3 hr.*** ▲

This course covers the exploration, settlement patterns, imperial system, social structure, rise of representative government in America, and the 18th-century wars for empires. I

The American Revolution

HIST 3550 ***3 cr. 3 hr.*** ▲

The course covers the coming of the Revolution, war tactics, and strategy, problems of the Confederation period, and the American Constitution. I

The U.S. Civil War and Reconstruction 1830–1877

HIST 3600 ***3 cr. 3 hr.*** ▲

The course examines politics, slavery, and Abolitionism. Political, military, and diplomatic aspects of the war and the failure of reconstruction is also covered. I

U.S. 1880–1920: Society and Culture

HIST 3655 ***3 cr. 3 hr.*** ▲

The major movements of the late nineteenth and early twentieth centuries in United States History are studied in this course, including rise of middle class culture, Populism, urbanization, trade unionism, consumerism, and Progressivism. I

U.S. 1920–1945: Society and Culture

HIST 3700 ***3 cr. 3 hr.*** ▲

This course cover topics in American politics, economics, and society from 1920-1945, with special emphasis on reform movements, the great Depression, and World War II. I

Cold War United States

HIST 3750 ***3 cr. 3 hr.*** ▲

This course explores recent American History from 1945 to 1990. Topics covered in the class include the Cold War, the Arms Race, Watergate, society, the economy, and post-war presidents. Emphasis is placed on Cold War foreign policy as it has affected the United States. I

American Labor, 1840–1960

****HIST 3800*** ***3 cr. 3 hr.*** ▲

The course studies the patterns, personalities, and social tensions involved in the responses of American Labor to the changing economic construction, from the pre-industrial society through the industrial to the post-industrial.
Prerequisites: HIST 1400, 1500.

The U.S. In World Affairs: 1898 to the Present

HIST 3850 ***3 cr. 3 hr.*** ▲

The class examines the age of imperialism. Events covered are World War I, the era of "isolation," origins of World War II, American involvement and wartime diplomacy, breakdown of East-West relations, the Cold War, and the Korean and Vietnam conflicts.

The Frontier in American History

****HIST 3900*** ***3 cr. 3 hr.*** ▲

The Frontier is studied as a historical, social, economic, and psychological process to determine its impact on American development.

"Writing History"

HIST 4000 ***3 cr. 3 hr.*** ▲

The class introduces the historical method with stress on bibliographical aids, historical fallacies, and the theories of history as they have developed. The class is primarily for history majors.

United States Industrial History I

****HIST 4100*** ***3 cr. 3 hr.*** ▲

The class studies the industrialization and urbanization of the United States from colonial times to 1870.

United States Industrial History II

****HIST 4150*** ***3 cr. 3 hr.*** ▲

The class is a continuation of HIST 4100.

Seminar

HIST 4500 ***3 cr. 3 hr.*** ▲

The seminar provides guided readings and research on a specified topic. It is designed to enrich research and analytical skills of future teachers and those desiring to enter graduate or other professional schools.

Special Methods in Teaching of History

HIST 4850 ***3 cr. 3 hr.*** ▲

Special techniques for the teaching of history and their relationship to the principles of general methods are studied. A Pre-Practicum of 25 hours is required.
Prerequisite: completion of Introduction to Secondary Education.

History Practicum in a Secondary School I and II

HIST 4860, 4870 ***6 cr.*** ▲

In the student teaching practicum students are assigned to cooperating schools for a semester of student teaching. A 2.75 GPA in History is required to enter the practicum.

Independent Study in History

HIST 4900 ▲ ●

The Independent Study is open to students majoring or specializing in history with the permission of the supervising Instructor and the department. Meeting times and credit are arranged upon approval.

Topics in History

HIST 5000 ***3 cr. 3 hr.*** ▲ ●

Courses having a more narrow focus or those taught on an irregular basis may be offered under the "Topics" heading. New courses may also be taught on an experimental basis under this title.

Human Services

Key to Course Offerings

* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

Theory, Issues, and Practice in Human Services

HMSV 1100 ***3 cr. 3 hr.*** ▲ ●

This course serves as an introduction to the general field of Human Services. Course goals include an introduction to the scope and nature of Human Services work and the agencies, organizations, and intervention models utilized. Particular focus is on the underlying philosophies, issues, and dynamics in agency/organization function. Guest lecturers from agencies, student presentations, agency reports, and a required practicum experience (30 hours per semester) represent priority activities in the course. This course is a prerequisite to all Human Services courses.

Community Resources

****HMSV 1150*** ***3 cr. 3 hr.*** ▲

This course acquaints students with the services of a variety of public (federal, state, and local) and private voluntary nonprofit agencies, which provide services for various populations. Students learn what services are provided, how to obtain services, how to make referral to these agencies, and how the agencies are operated (including staffing, funding, and administrative aspects of the agencies). This course may emphasize special types of agencies/populations in different semesters.
Prerequisite: HMSV 1100.

Introduction to Criminal Justice

HMSV 2000 ***3 cr. 3 hr.*** ▲ ●

This course provides the student with an overview of the structure and organization of the criminal justice system. Emphasis is placed on the examination of the functions and decision processes of those agencies that deal with the management and control of crime and criminal offenders. The course includes didactic presentations, assigned readings, class discussions, visiting practitioner lecturers, and small group discussions.

Working with HIV/AIDS in Human Services

HMSV 2100 **3 cr. 3 hr.** ▲

This course provides a comprehensive understanding of the psychosocial impact of the HIV/AIDS epidemic as well as appropriate community resources and services for dealing with it. This course examines how the transmission of the HIV virus has significant medical, psychological, social, and political consequences. Each student is expected to become part of community, state, and federal organizational efforts aimed toward preventing the transmission of HIV.

Delivery of Human Service Systems

****HMSV 2200*** **3 cr. 3 hr.** ▲

This course deals with social agencies/ organizations and how they establish goals, priorities, and programs; how they are governed, staffed, and financed; and how each relate to the needs of the people in the area served. Content may differ according to the delivery system being addressed. A practicum (20 hours per semester) is required.

Prerequisite: HMSV 1100.

Introduction to Rehabilitation Counseling

****HMSV 2300*** **3 cr. 3 hr.** ▲

The course provides an overview of the vocational rehabilitation process in the U.S., including its history and governing federal legislation. Emphasis is placed on the medical, psychological, sociocultural, and vocational factors in rehabilitation of handicapped individuals. This course focuses on the role of the Rehabilitation Counselor as a professional in the rehabilitation process.

Prerequisite: HMSV 1100.

Crisis Intervention

HMSV 2400 **3 cr. 3 hr.** ▲ ●

This course focuses on the concepts and techniques of Crisis Intervention. Many individuals are faced with such crisis situations as job loss, unwanted pregnancy, divorce, operations, death and dying. Students are exposed to the specialized short-term techniques that have been developed to help people in these situations. A supervised practicum (30 hrs. per semester) is required.

Prerequisites: HMSV 1100, PSY 2350.

Interviewing Techniques

****HMSV 2500*** **3 cr. 3 hr.** ▲ ●

This course is designed to help the student, whose goal is to be involved in a helping profession, learn about the problems and processes of interviewing while developing basic skills needed to become an effective interviewer. The course includes assigned readings, class discussions, taped interviews, demonstrations, and practice sessions in class. The course meets LAS requirement for Speaking and Listening for the Human Services major and for the Psychology major.

Prerequisites: HMSV 1100, PSY 2350 and permission of Instructor. Students must preregister in the semester prior to the course.

Juvenile Justice

****HMSV 2600*** **3 cr. 3 hr.** ▲

The course is designed to develop student awareness of past and contemporary philosophies, practices, and paradoxes of juvenile justice. The course examines the programmatic efforts designed for juveniles "in trouble with the law" and focuses on the relationships between the components of this system of justice. The content of the course is supplemented by current journal research, lectures, and panel discussions by practicing professionals, and a field-based class. A supervised practicum (20 hours per semester) is encouraged.

Prerequisite: HMSV 2000.

Services to Children

****HMSV 2700*** **3 cr. 3 hr.** ▲

Students examine the variety of services available to children to support, supplement, and substitute for the family. Students learn to understand the structure of the services provided and to explore the ethical dilemmas such services may create.

Prerequisite: HMSV 1100.

Social Work: Theory and Practice

****HMSV 2800*** **3 cr. 3 hr.** ▲

This course deals with the history, concepts, basic issues, and techniques of social work, including casework, group work, and community organization activities. Advanced study and career opportunities are also explored.

Prerequisites: HMSV 1100, SOC 1100.

Social Group Work

****HMSV 2900*** **3 cr. 3 hr.** ▲

The course exposes students to the theories and techniques of working with clients in groups. The course focuses on social group work as a method, its relationship to other social work methods, and to groups therapies. Students have the opportunity to observe and/or lead groups. A supervised practicum (30 hrs. per semester) is required.

Prerequisites: HMSV 1100, HMSV 2500, and permission of Instructor. Students must preregister in the semester prior to the course.

Human Services Administration

****HMSV 3000*** **3 cr. 3 hr.** ▲

The study of Human Services Administration is an exploration of administrative functions and their relationship to organizational effectiveness and efficiency. The internal and external politics of agency survival are addressed, and the theoretical concepts of management and leadership styles are explored. Course content is supplemented by lectures and panel discussions by practicing professionals, field-based classes, and current journal research. A supervised practicum (20 hours per semester) is encouraged.

Prerequisite: HMSV 1100.

Social Casework

****HMSV 3100*** **3 cr. 3 hr.** ▲

This course explores casework concepts and techniques as utilized in a variety of settings, such as family agencies, mental health settings, hospitals, and courts. The focus is on the casework process with individuals, couples, and families.

Prerequisites: HMSV 1100, HMSV 3500.

Working with the Aging

****HMSV 3200*** **3 cr. 3 hr.** ▲

The course examines past as well as contemporary philosophies, practices, and processes of working with the aging. Further, the course explores the various roles and practices utilized by social support and works in maintaining the social, psychological, and physical well-being of the aged. A supervised practicum (20 hrs. per semester) is required.

Community Based Corrections

***HMSV 3300** **3 cr. 3 hr.** ▲

This course examines the philosophy of community-based corrections from historical, legal, social, and psychological perspectives. The essence of probation and parole and their administration are considered in conjunction with criminal justice issues and practices that affect the court's decision to allow community sanctions and supervision in lieu of incarceration. Contemporary trends and alternatives to traditional supervision are explored as well. A supervised practicum (20 hours per semester) is encouraged.
Prerequisite: HMSV 2000.

Community Organization

***HMSV 3400** **3 cr. 3 hr.** ▲

This course focuses on methods used in organizing citizen action groups to bring about change. Principles, methods, and techniques of organizing, goal formulation, group maintenance, community planning, and strategies are studied.
Prerequisites: HMSV 1100, HMSV 2000.

The Abuse and Neglect of Children

***HMSV 3500** **3 cr. 3 hr.** ▲

This course presents an overview of concepts vital to understanding and working with the abusive and neglectful parent. Emphasis is on the differentiation between abuse and neglect, reporting responsibilities, legal aspects, prognosis, prediction, and the role of the community. Case studies are used to enhance student understanding.
Prerequisites: HMSV 1100 and PSY 2200.

Social Welfare Policy

HMSV 3580 **3 cr. 3 hr.** ▲

This course enables students to learn the importance of social welfare policy, the relationship of values to policy formulation, and how to analyze policy. Students apply this knowledge to income maintenance, poverty, health and mental care, housing and neighborhood living space, as well as to the general problems of service delivery.
Prerequisite: HMSV 1100.

Professional Issues in Human Services

***HMSV 3700** **3 cr. 3 hr.** ▲

This course is designed to develop student awareness of the professional issues that affect the role and responsibilities of the human service professional. Students explore the dilemmas and challenges that face the practitioner within the context of legally and ethically responsible human service work. Through course work the student is able to demonstrate a heightened awareness of one's own values and life experiences and how they affect the helping relationship and process. A stronger knowledge is gained of the rights and responsibilities of both client and helper in the helping relationship and process. Students become aware of the culturally diverse population of clients. An understanding of the major ethical and legal issues confronting practitioners in human services; an appreciation for the necessary competence, training, and education of the practitioner; and an awareness of ethical standards and professional guidelines for human service workers is achieved.
Prerequisites: HMSV 1100.

Methods of Case Reporting and Analysis

***HMSV 3800** **4 cr. 8 hr.** ▲

The class exposes students to the technical and practical skills involved in the process of preparing, recording, presenting, and analyzing individual case reports. Case report applications as they relate to schools, clinics, the courts, and other human service agencies are addressed during the course. A supervised practicum in an approved agency setting (90 hrs. per semester) is required. The course meets the LAS requirement for Writing for the Human Services major.
Prerequisites: HMSV 1100, PSY 2200, PSY 2350, HMSV 2500 and permission of Instructor. Students must preregister in the semester prior to the course.

***HMSV 4870-4880** **6 cr. 18 hr.**

Students work in an agency 18 hours per week throughout the school year, beginning in September. (6 credits each semester.)

***HMSV 4890** **12 cr. 36 hr.**

A block placement of 36 hours per week for one semester, either fall or spring. (12 credits, one semester.)

Field Work in Human Services

HMSV 4870-4880, 4890 **6 cr. 18 hr.** ▲
12 cr. 36 hr. ▲

Field Work is the structured academic experience that allows Senior Human Services majors, who have successfully met eligibility criteria, to integrate and apply the skills and theory of the Human Services discipline in a field-based setting. Such an experience helps the student develop an understanding of the effects of administrative practices and governing policies on the ability to carry out the responsibilities of his/her field placement.

Students participate in Field Work under the supervision of qualified professionals in Human Service Organizations, such as mental health agencies, social services, hospitals, prisons, family service agencies, probation departments, residential programs, nursing homes, community advocacy organizations, programs for the aging, crisis centers, etc. Also, some placements are conducted in industrial settings, requiring work in community relations, employee assistance programs, personnel departments, corporate donations, and human resource development programs. Placements may be in direct-service or in administrative settings. In addition to the field experience, students participate in a weekly seminar held by the college's supervising professor. Here, students share their experiences and develop a heightened awareness of their roles in the organizations in which they are functioning.

Students must have completed their prerequisites at least one semester before taking Field Work and must preregister with the Field Work/Internship office in the beginning of the semester prior to the semester before they plan to enter an agency, (For example, students planning a Fall placement must have completed their prerequisites by the end of the previous Fall semester and pre-register with the Instructor early in the previous Spring.) Students must have had previous volunteer experience (e.g. practicum) prior to enrolling in Field Work.
Prerequisites: HMSV 2900, HMSV 3800, and successful completion of the Field Work eligibility requirements.

Independent Study

HMSV 4900 ***1-6 cr. 3-18 hrs.*** ▲

Independent Study is offered to outstanding students of Junior or Senior standing and requires approval of the professor, of the Human Services Curriculum Committee, and of the Chairman of the Behavioral Sciences department. Independent Study may take the form of special advanced reading programs or problem identification and research. Under no circumstances is independent study substituted for regularly scheduled courses.

Topics in Human Services

HMSV 5000 ***3 cr. 3 hr.*** ▲ ●

Courses having a more narrow focus or those taught on an irregular basis may be offered under the "Topics" heading. New courses may also be taught on an experimental basis under this title.

Industrial Technology

Key to Course Offerings

Q: designates courses in the Quantitative Scientific Cluster

I: the Ideas and Events Cluster

B: the Human Behavior Cluster

L: the Literature, Language and Arts Cluster

C: Multicultural

IDIS: Interdisciplinary courses

Multicultural and interdisciplinary courses also fulfill a cluster designation.

* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

Electric Systems and Circuits

ITEC 1000 ***3 cr. 4 hr.*** ▲

An introductory course providing an overview of electrical technology with respect to electric production, transmission, control and use. Basic electrical concepts are covered in a lab setting.

Electronics I

ITEC 1100 ***3 cr. 4 hr.*** ▲

This beginning course provides an overview of electronics technology by introducing students to selected topics in linear circuits, analog electronic circuits, and digital electronic circuits.

Metal Fabrication Systems

ITEC 1200 ***3 cr. 4 hr.*** ▲

The course studies mass production theory, systems, and procedures in metal working.

Wood Fabrication Systems

ITEC 1300 ***3 cr. 4 hr.*** ▲

Fundamental woodworking techniques are studied as they relate to construction and manufacturing. Procedures are practiced through selected laboratory experiences.

Materials Testing

ITEC 1310 ***3 cr. 4 hr.*** ▲

This class provides an overview of selected materials and their properties, including laboratory experiences designed to give students an understanding of materials testing.

Construction Systems I

ITEC 1320 ***3 cr. 4 hr.*** ▲

The course will provide an overview and lab experience in 12 selected construction standards institute components of the construction industry. Through focused lab experiences, students will develop competencies in using the tools, equipment, instruments and techniques essential in the selected areas.

Technical Drawing

ITEC 1400 ***3 cr. 4 hr.*** ▲

This course includes lettering, dimensioning, orthographic projection, symbols, sectioning, isometric, and auxiliary views. Problem development and blueprint reading is stressed.

Architectural Graphics

ITEC 1450 ***3 cr. 4 hr.*** ▲

An introduction to the techniques and understandings involved in the use of drawing as a way of communicating and developing architectural ideas. Drawing is studied as a tool of visualization, exploring and documenting architectural form, organization, the setting of buildings in the land and the quality of light.

Graphic Arts Processes

ITEC 1500 ***3 cr. 4 hr.*** ▲

The course studies the production and evaluation of messages utilizing graphic arts processes. This includes graphic design, typesetting, camera work, stripping, platemaking, and offset press operations. *Prerequisite: ITEC 1720*

Typography

ITEC 1510 ***3 cr. 4 hr.*** ▲

The origins of the alphabet, evolution of type, traditional typography, nomenclature, and classification of typefaces are studied. Emphasis is on planning layout; budget considerations; dimensional coordination, proportion, and the grid system; copyfitting, markup, and proofreading; composition and computer and electronic publishing technology.

Energy Systems I

ITEC 1600 ***3 cr. 4 hr.*** ▲

The course studies solar and other forms of energy to supply household needs. Students build and test both commercial and laboratory made devices.

Energy Resources and Environment

ITEC 1650 ***3 cr. 4 hr.*** ▲

The Energy Resources and Environment course offers indepth knowledge of energy supplies and sources. The course treats in detail, topics as how rate of formation is slow than replacement, how energy sources could be best utilized, and to identify the technology associated with energy resources. The course will include some field trips.

Evolution of Industrial Technology

ITEC 1700 ***3 cr. 3 hr.*** ▲

The course studies the history of industrial technology, and the qualifications, duties, and responsibilities of related careers. A field based pre-practicum experience is an integral part of this course. This experience may be in a school or industrial setting. l

Technical Analysis

ITEC 1710 ***3 cr. 3 hr.*** ▲

Applications of mathematics to a variety of technical areas including electronics and mechanics are explored. Topics covered include complex numbers, Lissajou figures, vectors, curve fitting, error analysis, and computer methods.

Computers in Industrial Technology

ITEC 1720 ***3 cr. 4 hr.*** ▲

This course familiarizes students with computers through presentation of selected hardware and software concepts. Opportunities for extensive hands-on practice with application programs are provided.

Electronics II

ITEC 2100 ***3 cr. 4 hr.*** ▲

This course begins to develop the concepts and techniques appropriate to design and analyze linear and analog electronic circuits. Electronic circuits employing discrete devices are introduced.
Prerequisite: ITEC 1100.

Advanced Metal Fabrication Systems

ITEC 2200 ***3 cr. 4 hr.*** ▲

Specialized processes in the metal working industry are studied. Laboratory experiences include performing operations with tool cutter grinders, indexing heads, numerical control millers, turret lathes, and tracer lathes.
Prerequisite: ITEC 1200.

Wood Products Manufacturing

ITEC 2300 ***3 cr. 4 hr.*** ▲

In this course emphasis is on the mass production of a product employing the development and use of jigs, fixtures, and other suitable mass production procedures. Appropriate methods of production management are employed.
Prerequisites: ITEC 1300, ITEC 1400.

Construction Systems II

ITEC 2310 ***3 cr. 4 hr.*** ▲

The course studies residential construction with emphasis on construction methods, practices and procedures. The materials, equipment, and techniques used to construct a structure are examined, and architectural problems related to construction are researched. The course is taken with ITEC 2400.
Prerequisites: ITEC 1300, ITEC 1320.

Architectural Drawing

ITEC 2400 ***3 cr. 4 hr.*** ▲

Students design a practical residential structure, conforming to standard practices and Building codes. Technical skills are developed enabling students to communicate ideas. Topics discussed and employed include materials of construction, history, and development of various styles, orientation of house on lot, loads, and design of structural members. Field trips are taken and available films are used for instruction. The course is taken with ITEC 2310.
Prerequisite: ITEC 1400 or ITEC 1450.

Computer Aided Drafting (CAD)

ITEC 2410 ***3 cr. 4 hr.*** ▲

This course is designed to teach the general concepts related to automated drafting with emphasis on technical drawing. Specialized applications of industrial practices for drafting are experienced. One semester of technical or mechanical drafting is a prerequisite. A computer background is not necessary.
Prerequisite: ITEC 1400 or ITEC 1450.

Theory of Architecture

ITEC 2450 ***3 cr. 4 hr.*** ▲

Architectural situations will be explored that illustrate design theories both traditional and contemporary. Accepted construction techniques will be selected that best fulfill design situations. Emphasized will be the difficulties confronting designers as they resolve problems of conflict.
Prerequisite: ITEC 1320.

Offset Lithography

ITEC 2500 ***3 cr. 4 hr.*** ▲

The students study the lithographic form of printing as it is used in modern industry. The majority of the course is spent in the darkroom as well as setting up and running offset presses. Concepts covered include line copy, halftone, special effects, diffusion transfer, and density. Roles students pursue are designer, photographer, flat-stripper, platemaker, press operator, and binder.
Prerequisite: ITEC 1500.

Graphic Design

ITEC 2520 ***3 cr. 3 hr.*** ▲

Students study the design and production of messages. Students prepare artwork and mechanicals using equipment found in the Industrial Technology Department. The technology of communications is also included.
Prerequisite: ITEC 1500 (credit will NOT be given for both COMM 3810 and ITEC 2520.)

Screen Printing

ITEC 2550 ***3 cr. 4 hr.*** ▲

Students work with both hand-cut stencils and photo-direct emulsions. Emphasis is on multiple color registration and halftoning, using both hand and machine printing techniques. L

Energy Systems II

ITEC 2600 ***3 cr. 4 hr.*** ▲

The course is limited to students who have demonstrated the ability and desire to continue the research and development of a promising solar energy system as initiated in ITEC 1600.
Prerequisites: ITEC 1600.

Power and Lighting Systems

ITEC 2630 ***3 cr. 4 hr.*** ▲

Power and Lighting Systems course offers indepth knowledge of effective, efficient illumination and retrofitting. The course treats in detail, many topics such as smart house, temporary service and collect building, lighting system, financial and occupant information and apply that to required light levels per room and address quality issues such as lamp identification, lighting circuits and lighting codes. Students will develop and present plans for specific lighting systems as a part of laboratory work. The course will include field trips to active sites and research facilities.
Prerequisites: ITEC 1000.

Man Technology Society

ITEC 2700 ***3 cr. 3 hr.*** ▲

The course studies the universal characteristics of technology, including effects of technology on society and culture. Topics of interest are researched.
I, IDIS

Statics

ITEC 2710 ***3 cr. 3 hr.*** ▲

The course involves the study of laws of static equilibrium of real bodies. Topics examined are beam and structural analysis, friction, centroids, and moments of inertia.
Prerequisite: ITEC 1710.

Automated Manufacturing and Robotics I

ITEC 2730 ***3 cr. 4 hr.*** ▲

This course provides an opportunity to learn the fundamentals of industrial robotics. Basic theory and practice is stressed. Topics that are studied and experienced include robotics terminology, robot classification, industrial robot programming, and robot classifications.

O.S.H.A.

ITEC 2740 ***3 cr. 4 hr.*** ▲

The purpose of this course is to introduce students to the latest occupational safety and health standards and to provide opportunity for the student to perform practical inspections, complete reports, and recommend corrective measures to insure safety and healthful conditions. This is a basic O.S.H.A. 500 course.

Plastics Technology

ITEC 2750 ***3 cr. 4 hr.*** ▲

The course is an investigation of the rapidly expanding area of plastics. Emphasis is on plastics production, their merits, and limitations. Tests are conducted to confirm reference data and to promote a better understanding of various plastics and products made from them.

Designing and Planning

ITEC 2900 ***3 cr. 4 hr.*** ▲

Elements of product design are experienced through problem solving. Drafting, human engineering, and product analysis are incorporated in design and construction of prototypes.
Prerequisites: ITEC 1710 and four of the appropriate freshman level courses.

Electronics III

ITEC 3100 ***3 cr. 4 hr.*** ▲

This course further develops the concepts and techniques appropriate to the design and analysis of analog electronic circuits. It provides sufficient background for students who wish to elect upper-level electronics courses.
Prerequisites: ITEC 1100, ITEC 2100.

Digital Electronics

ITEC 3110 ***3 cr. 4 hr.*** ▲

The course is an introduction to the techniques for analyzing and synthesizing digital circuits. Emphasis in design work is on IC technology.
Prerequisites: ITEC 3100.

Control Theory

ITEC 3120 ***3 cr. 4 hr.*** ▲

The course is an introduction to control theory utilizing examples of mechanical, fluidic, electronic, and hybrid control systems. Emphasis is on design, utilizing the project approach.
Prerequisite: ITEC 3100.

Machine Processes

ITEC 3210 ***3 cr. 4 hr.*** ▲

The course covers the design and fabrication of metal products utilizing machine tools, metalworking processes, and welding.
Prerequisite: ITEC 2200.

Product Modeling and Rendering

ITEC 3220 ***3 cr. 4 hr.*** ▲

A laboratory course focusing on the preparation of product renderings and the development of three dimensional models for presentation and analysis of design products, processes or systems. The course will cover the types and uses of renderings and models; techniques and standards in their development; and appropriate material representation.
Prerequisite: junior status.

Estimating and Bidding

ITEC 3300 ***3 cr. 4 hr.*** ▲

The principles of preparing comprehensive unit pricing and systems approach for construction is taught in this course. The emphasis is on detailed estimates in order to determine the scope and cost of each proposed design element.
Prerequisite: ITEC 2400.

Mechanical and Plumbing Systems

ITEC 3310 ***3 cr. 4 hr.*** ▲

The course surveys the principles of heating, ventilating, air conditioning, purification, and control systems. Emphasis is placed on electrical and electronic control and delivery systems, water feed delivery systems, and waste water disposal systems.
Prerequisites: ITEC 2310, 2400.

Construction Supervision

ITEC 3320 ***3 cr. 4 hr.*** ▲

This course enhances the student's understanding and skills for supervising a construction project. The emphasis is on coordinating all of the construction resources, including materials and manpower, needed for the successful completion of on-site structure.
Prerequisites: ITEC 3300, 3410.

Wood Technology

ITEC 3330 ***3 cr. 4 hr.*** ▲

Students are introduced to a series of industrial techniques through which lumber is used to produce products. Veneering, patternmaking, model building, finishing, laminating, and bending are some of the techniques explored.
Prerequisite: ITEC 1300.

Construction Systems III

ITEC 3340 ***3 cr. 4 hr.*** ▲

The course is a study of construction techniques and structural elements. Emphasis is placed on heavy construction procedures used in commercial and industrial projects. The course is taken with ITEC 3410.
Prerequisites: ITEC 2310, 2400.

Engineering Drawing

ITEC 3400 ***3 cr. 4 hr.*** ▲

In this course students examine orthographic projection, intersections, developments, revolutions, axonometrics, assembly details, and pictorial drawings.
Prerequisites: ITEC 1400, 2410.

Drafting Commercial Structures

ITEC 3410 ***3 cr. 4 hr.*** ▲

Students develop and produce working drawings, demonstrations, information schedules, and portfolios related to the construction of non-residential properties. The course is taken with ITEC 3340.
Prerequisites: ITEC 2400, 2310.

Architectural Design I

ITEC 3430 ***3 cr. 4 hr.*** ▲

Designing living spaces will be emphasized during this studio session. The common problems presented by the multiple home activities of house cleaning and maintenance, storage, meal preparation and eating, personal hygiene, child rearing and aging, entertainment, safety, security, etc. will be within the purview of this study. The visual analysis of existing space will be emphasized. Ergonomics and human behavior will be important areas of consideration.

Prerequisite: junior status.

Advanced CAD

ITEC 3450 ***3 cr. 4 hr.*** ▲

Students study and use advanced Computer Aided Drafting techniques to create two- and three-dimensional surface and solid model drawings applicable to their ITEC concentration area. Selected drawings and a term project are included in a student-developed portfolio.

Prerequisite: ITEC 2410.

Architectural Design II

ITEC 3460 ***3 cr. 4 hr.*** ▲

Select problems will be completed through which architectural fundamentals will be explored. Individual and group activities will introduce the topics of land site analysis and improvements; structured forms and applied materials; lighting and color considerations; the applications of scale and proportion; and the organization of space. Solutions will be presented in appropriate portfolio form.

Prerequisite: ITEC 3430.

Production Printing

ITEC 3510 ***3 cr. 4 hr.*** ▲

This course emphasizes scheduling and production of contracted jobs. The course is designed to allow serious students to apply their previous instruction in a controlled, industrial setting. Enrollment is limited to ten students.

Prerequisites: ITEC 2500.

Printing Estimating and Production Coordination

ITEC 3520 ***3 cr. 3 hr.*** ▲

This course provides students with an opportunity to determine how to estimate printed products properly. Relationships between the estimating department, sales, customer service, order writing, and production departments are covered.

Prerequisite: ITEC 2500.

Energy Conservation Principles

ITEC 3600 ***3 cr. 4 hr.*** ▲

This laboratory course offers in-depth knowledge of energy efficiency, conservation retrofits, and choosing appropriate strategies. Cases are discussed regarding the reduction of energy losses and the application of energy conservation techniques for building control systems. Students develop and present plans for specific energy conservation projects that include field trips to sites and research facilities.

Co-Generation and Waste Recovery

ITEC 3650 ***3 cr. 4 hr.*** ▲

The Co-generation and Waste Recovery Systems course will focus on analyzing engineering and co-generation systems to meet industrial process needs and use of reject heat to integrate with the production plant. The course will also cover responsibilities of co-generators and their interconnection cost. Students will run computer programs for metering practices and other metering options.

Prerequisites: ITEC 1600, 2600.

Fluid Power Technology

ITEC 3700 ***3 cr. 4 hr.*** ▲

This course introduces the student to applications of fluid power in a variety of industries. Topics covered include properties and behavior of liquids and gases, schematic diagrams for hydraulic and pneumatic circuits, component uses and characteristics, methods of controlling fluid power systems, circuit design and analysis, and uses of hydraulic/pneumatic systems in automated manufacturing.

Prerequisite: ITEC 1710.

Quality Control

ITEC 3710 ***3 cr. 4 hr.*** ▲

The course studies the development and utilization of those statistical methods that enhance quality control within a manufacturing environment. Lab work includes the use of a variety of inspection instruments and small scale testing is done to generate data.

Prerequisite: ITEC 1710.

Automated Manufacturing and Robotics II

ITEC 3730 ***3 cr. 4 hr.*** ▲

The purpose of this course is to develop competencies in the set-up, control, and use of CNC equipment. Emphasis is on the development of integration (CIM) applications between robots (for material handling and assembly) and CNC automated manufacturing equipment.

Prerequisites: ITEC 1200, 1400.

HAZWOPER

ITEC 3740 ***3 cr. 4 hr.*** ▲

This is an OSHA-approved hazardous waste operations and emergency response course (OSHA 1910.120). Topics covered include OSHA regulations for this area, exposure risks, material handling practices and equipment, decontamination procedures, and the requirements of OSHA 1910.120.

Methods of Teaching Technology Education

ITEC 3800 ***3 cr. 3 hr.*** ▲

This course is designed to provide the prospective technology education teacher with a series of related academic, observational, and participatory experiences based on the fundamental elements of the teaching-learning process. Students develop, implement, and evaluate a variety of short-range instructional methods.

Prerequisite: junior status.

Curriculum Development in Technology Education

ITEC 3810 ***3 cr. 4 hr.*** ▲

During this course the student is presented experiences that relate directly to the development of a course of study. Students also have the opportunity to analyze and develop strategies pertaining to curriculum development. Students undergo a pre-practicum in a public school technology education program.

Prerequisite: ITEC 3800.

Production Planning and Control

ITEC 3900 ***3 cr. 3 hr.*** ▲

Theory and practice in the essentials necessary for the operation of a manufacturing or service facility are the main thrust of this course. Layout of production, line operations, time study requirements, and related work problems resulting in an economical and efficient operation are included.

Prerequisites: junior status.

Engineering Experimentation

ITEC 3910 ***3 cr. 4 hr.*** ▲

Using a series of open-ended projects, this course prepares the student to work independently in a variety of technical areas. Topics covered include: the creative process, research using technical literature, error analysis for single-sample and multi-sample experiments, types of instrumentation, and technical report writing. This course satisfies the junior-level writing requirement for industrial technology students.

Prerequisite: junior status.

Strength of Materials

ITEC 3930 ***3 cr. 4 hr.*** ▲

This course serves as an introduction to the behavior of real materials under the influence of forces and couples. Axial, shear, torsional, and flexural stresses and strains are determined.

Prerequisites: ITEC 1710, ITEC 2710.

Industrial Electronics

ITEC 4100 ***3 cr. 4 hr.*** ▲

The course studies the application of electronic principles to devices and equipment, involving thermoelectronics, photoelectronics, solid-state motor control, welding, etc.

Prerequisite: ITEC 3100 and by permission of Instructor.

Electronic Communications Systems

ITEC 4110 ***3 cr. 4 hr.*** ▲

The system and circuits utilized in electronic communications are studied, including both transmitters and receivers. Methods of modulation are discussed and television is utilized as a representative system.

Prerequisite: ITEC 3100 and by permission of Instructor.

Microprocessor-Based Control Systems

ITEC 4120 ***3 cr. 4 hr.*** ▲

This course covers both hardware and software. The hardware portion includes a necessary introduction to the microprocessor itself and emphasizes interfacing the use of microprocessors to affect control. The software portion provides a necessary skill level in machine language programming.

Prerequisite: ITEC 3100.

Design of Machine Elements

****ITEC 4220*** ***3 cr. 3 hr.*** ▲

The course introduces design principles and failure modes for various mechanical components. Topics covered include static and fluctuating Loads for brittle and ductile materials and fatigue stress concentrations.

Prerequisites: ITEC 3400, 3930.

Seminar in Construction

ITEC 4310 ***3 cr. 4 hr.*** ▲

This course is open to students specializing in construction. The course deals with current trends and issues facing the construction industry at local, state, and federal levels. The emphasis is on utilizing available resources to solve current problems.

Prerequisites: ITEC 3300, 3320.

Site Planning

ITEC 4350 ***3 cr. 4 hr.*** ▲

The scope of this study will entail the problems presented to a designer by an unimproved land site. Proper design concepts will be applied as techniques and materials are selected. Solutions will be presented in the form of drawings and estimated costs. Legalities relating to construction codes and zoning will be emphasized.

Prerequisites: junior status.

Descriptive Geometry

****ITEC 4400*** ***3 cr. 3 hr.*** ▲

Descriptive Geometry is concerned with graphical representation and the problem solving using spatial relationship of points, lines, and planes by means of projections.

Prerequisite: ITEC 3400.

Architectural Professional Practices

ITEC 4470 ***3 cr. 4 hr.*** ▲

A study will be made of the various office forms, procedures, and protocol through which the practice of architecture is organized. Topics will include the personal ethical and legal interrelationships between other professionals, property owners, and the skilled trades. Legal forms and procedures common to the profession will be introduced.

Prerequisite: senior status.

Process Color Separation

ITEC 4500 ***3 cr. 4 hr.*** ▲

In this course students experience scanning color photographs directly into electronic publishing systems. Using the electronic publishing hardware and software the images are manipulated and merged to create completed printing negatives. The electronic files and negatives are proofed using a variety of color printers and color keys.

Prerequisite: ITEC 2500.

Performance Contracting

ITEC 4600 ***3 cr. 4 hr.*** ▲

The course is designed to provide students the guidance to use the performance contracting energy financing/service mechanism effectively and provide an excellent mechanism to bring economy, energy and the environment into appropriate perspective. The first half of the course builds an understanding of the options available and then walks through each step to effectively secure performance contracting services. The second half applies the material from the first half to different market segments i.e. the federal government and utilities from end-user's point of view. Students will present and discuss their reports in class.

Prerequisites: ITEC 1600, 2600, 3600.

Seminar in Graphic Arts

ITEC 4520 ***3 cr. 3 hr.*** ▲

In the seminar students study and discuss current trends, issues, problems, and technical material in graphic arts. Emphasis is placed on comprehending why the trends must take place and how the emerging technology allows the trends to happen. Students are able to project future technical trends within the graphic area.

Prerequisite: ITEC 2500.

Pre-practicum and Seminar

ITEC 4840 ***3 cr. 3 hr.*** ▲

The seminar gives students the opportunity to formulate concepts of technology education and develop a working knowledge of principles and practices of technology education administration. Pre-practicum experiences are also included. The course meets the state requirement for certification.

Prerequisites: ITEC 3800, 3810.

Practicum in Technology Education

ITEC 4860 ***10 cr. 30 hr.*** ▲

The Practicum provides experience in planning and implementing instructional strategies in a public-school setting. A self-evaluation is required. The Practicum meets the state requirement for certification.

Prerequisite: permission of Instructor.

Internship in Industrial Technology

ITEC 4960 ***12 cr. 36 hr.*** ▲

In the Internship students participate in an industrial experience with the approval of the Industrial Technology faculty.

Independent Study

ITEC 4900 ***3 cr.*** ▲

The Independent Study allows students to enroll in a directed study.

Topics in Industrial Technology

ITEC 5000 ***3 cr. 3 hr./3 cr. 4 hr.*** ▲

Courses having a more narrow focus or those taught in an irregular basis may be offered under the "Topics" heading. New courses may also be taught on an experimental basis under this title.

Prerequisite: permission of Instructor.

Interdisciplinary

Key to Course Offerings

Q: designates courses in the Quantitative Scientific Cluster

I: the Ideas and Events Cluster

B: the Human Behavior Cluster

L: the Literature, Language and Arts Cluster

C: Multicultural

IDIS: Interdisciplinary courses

Multicultural and interdisciplinary courses also fulfill a cluster designation.

* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

Each student is required to complete at least two interdisciplinary courses as part of the Common Graduation Requirements in the Liberal Arts and Sciences Program. These courses are often described in the discipline most closely associated with the interdisciplinary course. This section gives complete course descriptions for the interdisciplinary course or refers to specific areas for descriptions if they are located in other sections.

History of Architecture

ART 1300 ***3 cr. 3 hr.*** ▲

See ART 1300. I, L, C

Art Criticism

ART 3100 ***3 cr. 3 hr.*** ▲

See ART 3100. L, C

Literature and Disability

ENGL 2300 ***3 cr. 3 hr.*** ▲ ●

See ENGL 2300. L, B

French Civilization

FREN 3000 ***3 cr. 3 hr.*** ▲

See FREN 3000. I, L, C

Economic Geography

GEOG 3000 ***3 cr. 3 hr.*** ▲

See GEOG 3000. I, C

History of Mexico, Central America, and the Caribbean

HIST 2700 ***3 cr. 3 hr.*** ▲

See HIST 2700. I, C

History of South America

HIST 2750 ***3 cr. 3 hr.*** ▲

See HIST 2750. I, C

Introduction to Women's Studies

IDIS 1000 ***3 cr. 3 hr.*** ▲ ●

The course is a cross-cultural, historical, and interdisciplinary introduction to topics and themes in women's experiences, including roles in the family, the work force, and public life. L, I, B, C

Women in Latin America

IDIS 1100 ***3 cr. 3 hr.*** ▲

Through autobiographies, literature, and films, students examine a multicultural and interdisciplinary view of the social, political, and economic situation of contemporary Latin American women.

Introduction to International Studies

IDIS 1200 ***3 cr. 3 hr.*** ▲

The purpose of this survey course is to acquaint students with the field of international studies in the context of contemporary global change. Through lectures, films, performances, and readings, the student gains perspective on some very rapid and important international political-economic transformations and cultural changes.

Creative Arts

IDIS 1300 ***3 cr. 3 hr.*** ●

Participants acquire basic skills in music, movement, visual art, and language with which they create personal and group works. A final project demonstrating these skills as well as attendance, outside readings, and final exam are required.

Global Issues

IDIS 1800 ***3 cr. 3 hr.*** ▲ ●

This course examines the interdependency of the world's nations by focusing on current events in the international area and issues such as ozone depletion, pollution, the global economy, conflict and cooperation, population, and hunger. I, C, IDIS

Dilemmas of Peace and War

IDIS 2100 ***3 cr. 3 hr.*** ▲

This course is an interdisciplinary study of the issues of peace and war. It interweaves history, political science, philosophy, literature, and psychology through readings, discussions, lectures, media, and class presentations. I, L, C, IDIS

Contemporary Issues in Women's Health

IDIS 2340 ***3 cr. 3 hr.*** ▲

This course offers a multicultural and interdisciplinary examination of women's health issues, including violence against women, sexual freedom, abortion, menopause, work place risks, and problems of poor, elderly women. I, B, C, IDIS

Caribbean Cultures

IDIS 2400 ***3 cr. 3 hr.*** ▲

This course introduces the culture, politics, economy, and natural history of the Caribbean, and the relation of these facets to the culture of our students. L, C, IDIS

Culture and Society of India

IDIS 2500 ***3 cr. 3 hr.*** ▲

This course explores developments in India's cultural heritage, historical epochs, religious traditions, and socio-political movements from antiquity to the present. Class work involves numerous readings of articles on select topics and writing. I, C, IDIS

Prerequisite: Writing II.

Man, Society, and Technology

IDIS 2700 ***3 cr. 3 hr.*** ▲

The course studies universal characteristics of technology, including effects of technology on society and culture. Topics of interests are researched. I, IDIS

Adaptations

PHED 3050 ***3 cr. 3 hr.*** ▲

(See PHED 3050) Q, IDIS

Commonwealth of the Arts

MUSC 2100 ***3 cr. 3 hr.*** ▲ ●

(See MUSC 2000) L, I, B, C, IDIS

Logic

PHIL 1100 ***3 cr. 3 hr.*** ▲ ●

(See PHIL 1100) Q, L. IDIS

Philosophy of Human Nature

PHIL 2600 ***3 cr. 3 hr.*** ▲ ●

(See PHIL 2600) I, B, IDIS

Contemporary Philosophy

PHIL 3340 ***3 cr. 3 hr.*** ▲

(See PHIL 3340) I, IDIS

Marxism

PHIL 4430 ***3 cr. 3 hr.*** ▲

(See PHIL 4430) I, IDIS

Dostoevsky and Tolstoy

RUSS 2400 ***3 cr. 3 hr.*** ▲

(See RUSS 2400) L, I, C, IDIS

Physiological Psychology

PSY 3420 ***3 cr. 3 hr.*** ▲

(See PSY 3420) B, Q, IDIS

Russian Literature in English Translation

RUSS 2500 ***3 cr. 3 hr.*** ▲

(See RUSS 2500) L, I, C, IDIS

Russian Life and Culture

RUSS 2600 ***3 cr. 3 hr.*** ▲

(See RUSS 2600) L, I, C, IDIS

Race and Ethnic Relations

SOC 2500 ***3 cr. 3 hr.*** ▲ ●

(See RUSS 2500) B, I, C, IDIS

Social Stratification

SOC 3000 ***3 cr. 3 hr.*** ▲ ●

(See SOC 3000) B, I, C, IDIS

Women in American Society

SOC 3770 ***3 cr. 3 hr.*** ▲

(See SOC 3770) B, C, IDIS

Leadership Academy (Honors Program)

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Colloquium on Community

LEAD 1000 ***1 cr. 1 hr.***

The first Honors Colloquium stresses the theme of leadership, especially within the contexts of our campus and the local community. It provides a practical as well as intellectual orientation toward the immediate world we live in at Fitchburg State. The course will provide an introduction to the functions of college governance and local city government. Students will study leadership not merely from a theoretical perspective but also in real world contexts.

Foundations of Leadership I

LEAD 1005 ***3 cr. 3 hr.***

This course focuses on what it means to be leaders in today's world. Students will study different theories of leadership as they apply to leaders, followers, and situations and will have opportunities to observe and apply these theories in real-life situations. Students will also be introduced to some basic psychological research methods and will use these methods to complete several small leadership projects.

Foundations of Leadership II

LEAD 1010 ***3 cr. 3 hr.***

The second course in the leadership sequence focuses on learning to be an effective leader. The main objective of this course is to teach students leadership skills including listening, negotiating, building consensus, working with resistance and conflict, problem solving, assertiveness, giving and receiving feedback, and motivating others. Students will study interpersonal and group theory and apply these theories to leadership situations in laboratory and community settings. This course will culminate in an applied on-campus group leadership project.

Service Learning Project

LEAD 1025 ***1 cr. 3 hr.***

This Service Learning Project is basic to a citizen leader's preparation. Students will do a thirty-hour practicum at community agencies, neighborhood organizations, schools, businesses or other settings deemed appropriate for service learning. Students will work in service teams under the aegis of both site and college supervisors. This structured learning environment will allow students to 1) become familiar with their community, 2) work with people on the teams as well as with people at the site, 3) learn and use skills for responsible citizenship and 4) develop their sense of civic responsibility. The college supervisor will hold a seminar once a week for students in the field. Topics of the seminar will relate to students' experiences in the agencies as well as to students' progress in recognizing the impact of their contributions.
Prerequisite: LEAD 1000

Honors English I

LEAD 1050 ***3 cr. 3 hr.***

This course encourages the development of each student's writing, independent reading and research abilities. Concepts and expressions of leadership in the classical and romantic traditions in literature and the fine arts will be emphasized. Fictional and non-fictional literature will be examined from various class, cultural, gender, historical, literary and political perspectives.

Leadership in the Outdoors

LEAD 1140 ***1cr. 1 hr.***
(PHED 1140)

Leadership in the Outdoors is a course designed for students in the Leadership Academy. Experiential by design, the course provides students an opportunity to experience and practice a variety of leadership styles through participation in outdoor adventure activities such as: a confidence course, initiative games, orienteering, canoeing and mountain hiking. The inquiry and analysis for the different types of leadership styles will be conducted for both the individual student and the entire class. An overnight camping trip will culminate the Leadership in the Outdoor course.

The Changing World I

LEAD 1150 ***3 cr. 3 hr.***

This course presents an overview of how the world changed during the 19th century. Built upon a historical framework within the context of global economy and hegemony, it will introduce students to the lingering implications of such themes as the Industrial Revolution, Nationalism in the West, Imperialism in Asia and Africa, and the globalization of economy and communication. It will explore how European political and industrial power impacted the Afro-Asian nations, but more importantly how it sustained their own expanding European industries and economy.

Honors English II

LEAD 1200 ***3 cr. 3 hr.***

This course is a continuation of Honors English I and emphasizes writing, independent reading and research. Students examine varieties of leadership in the personal narratives of cultural, intellectual and political leaders; the analyses of social critics and theorists and in works of fiction. We will examine works from various class, cultural, gender, historical, literary, and political perspectives. The diversity of texts affords students opportunities to develop strategies for the interpretation and analysis of different kinds of source material and to evaluate the concept of "leadership" in many contexts.

The Changing World II

LEAD 1250 ***3 cr. 3 hr.***

The focus of this course will be on the dramatic changes which took place during the 20th century. Drawing upon the disciplines of History and Political Science, it will trace the political, social, and economic significance of such topics as the rise of fascism and communism, the "Pax Americana," the Nuclear Age, the rise of National Liberation Movements in the Third World, the collapse of communism, and ongoing globalization as we approach the new millennium. Through its exploration of the forces which shaped the 20th century, the students will learn not only about the world around them, but also about the world which will be entering the 21st century.

Leaders in the Humanities: The 19th century

LEAD 2000 ***3 cr. 3 hr.***

An interdisciplinary study of art, music, philosophy and literature from Classicism and Neo-Classicism through Post Impressionism, including the movements of Romanticism, Post-Romanticism, Realism and Impressionism. Emphasis will be placed upon the leaders of the above movements within their disciplines.

Colloquium: Leaders in the Humanities (19th century)

LEAD 2001 ***1 cr. 1 hr.***

This colloquium complements Leaders in the Humanities: The 19th century by emphasizing research techniques for the humanities. Students will learn to do research using a variety of primary and secondary sources. They will also learn how to present their research in a variety of media.

Leaders in the Humanities: 20th century

LEAD 2050 ***3 cr. 3 hr.***

An interdisciplinary and multicultural study of art, music, philosophy and literature from 1890 to 1995 in Europe and the United States. Periods covered include French Post Impressionism, Fauvism and Cubism; German Expressionism; Spanish and French Surrealism; Early American Modernism, the Harlem Renaissance, Regionalism and Jazz; Abstract Expressionism; Pop Art; Earthworks and contemporary trends. Emphasis will be placed upon the leaders of the above movements within their disciplines.

Colloquium: Leaders in the Humanities (20th century)

LEAD 2051 ***1 cr. 1 hr.***

This colloquium complements Leaders in the Humanities: The 20th century and continues the development of research techniques for the humanities. Students will expand their understanding of primary and secondary source materials and further develop their presentation skills.

Physics, Mathematics and Technology

LEAD 3000 ***4 cr. 5 hr.***

This course will introduce the principal ideas and the development of modern 20th century physics along with its foundations in mathematics. After historical review of the development of ideas from Newton's laws through 19th century physics, aspects of quantum mechanics will be addressed. These include the wave-particle duality of nature, the Uncertainty Principle, the probabilistic nature of the Universe, and Einstein's Special and General Theories of Relativity.

Biology, Mathematics and Technology

LEAD 3050 ***4 cr. 6 hr.***

This course will address current issues such as the Human Genome mapping project, the spread and control of disease, population growth, and environmental concerns. Each of these topics requires a clear understanding of the mathematics behind the biological questions. A case-study approach and investigative activities that use laboratory experiments and computer simulations in concert with more traditional presentations will provide the focus for addressing these topics. These investigations will illustrate broader mathematical and biological concepts while engaging the students in problem solving, planning, decision making, and group discussions.

Colloquium: Biology, Mathematics and Technology

LEAD 3051 ***1 cr. 1 hr.***

The third year colloquium will emphasize the societal, ethical and moral issues related to scientific advances. Specific topics will follow closely those being presented in Biology, Mathematics, and Technology. Students will be expected to express their viewpoints through class discussion and a personal journal. Effective debating and good listening skills will be taught and cultural differences in beliefs and practices will be discussed.

Mathematics

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Basic Mathematics I

MATH 0100 ***3 inst. cr. 4 hr.*** ▲ ●

This class serves as a review of basic arithmetic skills and an introduction to elementary algebra.

Basic Mathematics II

MATH 0200 ***3 inst. cr. 4 hr.*** ▲ ●

The course serves as a continuation of Basic Mathematics I. Concepts studied range from Elementary Algebra through quadratic equations.

Note 1: Institutional Credits (inst. cr.) do not count toward graduation.

Note 2: All students must pass the Math Placement Exam or MATH 0200 before they are permitted to take any of the following mathematics courses.

Finite Mathematics

MATH 1200 ***3 cr. 3 hr.*** ▲

In this course a variety of discrete mathematical models are developed and applied to business and to the social and life sciences. Topics covered include matrices, linear programming, probability, and game theory. Q

Introduction to Functions

MATH 1250 ***3 cr. 3 hr.*** ▲ ●

This course provides a study of mathematical functions, graphing techniques, and applications. The functions covered in the class are linear, quadratic, polynomial, rational, exponential, and logarithmic. Credit is not awarded for both MATH 1250 and MATH 1300. Q

Precalculus

MATH 1300 ***3 cr. 3 hr.*** ▲ ●

This course prepares students for the study of calculus. Topics covered include real numbers, equations and inequalities, analytic geometry, as well as polynomial, trigonometric, exponential, and logarithmic functions. Credit is not awarded for both MATH 1250 and MATH 1300. Q

Mathematics Across the Curriculum

MATH 1400 ***3 cr. 3 hr.*** ▲

This course introduces students to a variety of topics in applied mathematics, including population modeling, measurement, growth and form, social decision making, and graph theory. The course is required for Elementary Education majors and Middle School Education majors. Q

Applied Statistics I

MATH 1700 ***3 cr. 3 hr.*** ▲ ●

Methods of data collection, organization, and interpretation, sampling, probability, estimation, and testing are applied to areas including biology, business, medicine, economics, and education. Credit is not awarded for both MATH 1700 and MATH 1800. Q

Business Statistics

MATH 1800 ***3 cr. 3 hr.*** ▲ ●

Topics covered in this course include descriptive methods, probability distributions, estimation, testing, analysis of variance, and regression analysis. (Credit is not awarded for both MATH 1700 and MATH 1800.) Q

Prerequisite: MATH 1250 or MATH 1300.

Informal Geometry

****MATH 2000*** ***3 cr. 3 hr.*** ▲

This course involves an intuitive study of basic geometric objects and concepts. Topics studied vary, but are chosen for their intuitive appeal as well as their geometric significance.

Calculus for Business

MATH 2200 ***3 cr. 3 hr.*** ▲ ●

This course surveys methods and applications of the calculus for functions of one variable, which are useful in business and economics. Topics include differentiation with applications to rates and maximum and minimum values, integration techniques with applications to areas, cost, and rates. (Credit is not awarded for both MATH 2200 and MATH 2300.) Q

Prerequisite: MATH 1250 or MATH 1300.

Calculus I

MATH 2300 ***4 cr. 5 hr.*** ▲ ●

The derivative of a function, methods of differentiation, and applications are studied. (Credit is not awarded for both MATH 2200 and MATH 2300.) Q

Prerequisite: MATH 1300 or its equivalent.

Calculus II

MATH 2400 ***4 cr. 5 hr.*** ▲ ●

The course involves the study of the Riemann Integral, methods of integration, and applications. Q

Prerequisite: MATH 2300 or its equivalent.

Introduction to Mathematical Thought

MATH 2500 ***3 cr. 3 hr.*** ▲

The course is intended to introduce mathematics as the science of reasoning. Topics covered include elementary set theory, logic, techniques of proof, basic properties of the real number system, mathematical induction, and axiomatic systems. Q

Prerequisite: MATH 1300 or its equivalent.

Linear Algebra

MATH 2600 ***3 cr. 3 hr.*** ▲ ●

In this course topics covered include the application of vector spaces, linear transformations, and matrices. Q

Prerequisite: MATH 2300.

Applied Statistics II

****MATH 2700*** ***3 cr. 3 hr.*** ▲ ●

This course is a continuation of MATH 1700. Topics covered include estimation and testing, simple linear and multiple regression, analysis of variance, and nonparametric methods. Q

Prerequisite: MATH 1700 or MATH 1800.

Introduction to Secondary School Teaching

MATH 2860 ***3 cr. 3 hr.*** ▲

This course is required of all students entering a provisional certification program at the secondary level. It is a sophomore level course for full-time undergraduates and the first course taken by transfer and certification-only students. Students become familiar with the complexities of secondary school teaching and its demands. The course gives faculty the opportunity to screen students and gives students the opportunity to test their commitment to teaching. This course includes a pre-practicum requirement and is a prerequisite for other certification course requirements.

Geometry I

MATH 3000 ***3 cr. 3 hr.*** ▲

The course involves a formal study of basic concepts in geometry and the foundations of Euclidean geometry. This course is for mathematics majors or minors and students with a mathematics specialization—all others need permission from the Instructor.

Prerequisites: MATH 2400, 2600.

Discrete Algebraic Structures

MATH 3100 ***3 cr. 3 hr.*** ▲

The course studies discrete algebraic structures of interest in computer science. Topics covered include partial orders, Boolean algebra, graph theory, and finite state machines. Q

Prerequisite: MATH 2600.

Elementary Number Theory

MATH 3150 ***3 cr. 3 hr.*** ▲

This course studies the properties of the integers. Topics covered include divisibility, prime numbers, congruencies, Diophantine equations, and mathematical induction.

Prerequisite: MATH 2500.

History of Mathematics

MATH 3200 ***3 cr. 3 hr.*** ▲

The development of mathematical ideas and methods from ancient to modern times and their relevance to other fields of knowledge is studied. This course is intended for mathematics majors, mathematics minors, or mathematics specialists.

Prerequisite: MATH 2400.

Calculus III

MATH 3300 ***3 cr. 3 hr.*** ▲ ●

This course studies conic sections, indeterminate forms, Taylor polynomials, infinite and power series, differentials, and multiple integrals. Q

Prerequisite: MATH 2400.

Calculus IV

MATH 3400 ***3 cr. 3 hr.*** ▲ ●

The calculus of polar coordinates, parametric curves, vector valued functions, quadratic surfaces, and directional derivatives are studied. Double integrals in polar coordinates, line integrals, and differential equations may also be considered. Q

Prerequisite: MATH 3300.

Ordinary Differential Equations

MATH 3550 ***3 cr. 3 hr.*** ▲

Students examine linear first and second order differential equations, methods of solution, and applications. Series solutions and higher order linear equations are considered.

Prerequisites: MATH 2600 and 3300.

Introduction to Mathematical Logic

****MATH 3600*** ***3 cr. 3 hr.*** ▲

This course serves as an elementary introduction to classical and symbolic logic, including standard sentential and first order predicate calculi.

Prerequisite: MATH 2500 or MATH 2300.

Mathematics Seminar

MATH 3900 ***1 cr. 1.5 hr.*** ▲

The Seminar provides the opportunity for problem solving and research on one or more topics outside the core curriculum areas.

Real Variable Theory

****MATH 4000*** ***3 cr. 3 hr.*** ▲

The course covers rigorous treatment of the foundations of differential and integral calculus with such topics as the real numbers, continuity, metric, and Euclidean spaces.

Prerequisites: MATH 2600 and MATH 3300.

Topology

****MATH 4050*** ***3 cr. 3 hr.*** ▲

The course studies the following topics: point sets, metric spaces, topological spaces, connectedness, and compactness.

Advanced Multivariate Calculus

MATH 4150 ***3 cr. 3 hr.*** ▲

The differential and integral calculus of vector valued functions and functions of several variables is examined.

Prerequisites: MATH 2600, 3400.

Probability and Statistics I

MATH 4200 ***3 cr. 3 hr.*** ▲

The course involves a careful development of elementary probability theory with applications followed by the study of discrete and continuous random variables, including the binomial, Poisson, and normal.

Prerequisite: MATH 3300.

Probability and Statistics II

MATH 4250 ***3 cr. 3 hr.*** ▲

Random variables and their probability distributions are used to study problems in estimation, hypothesis testing, regression, and analysis of variance.

Prerequisite: MATH 4200.

Abstract Algebra I

MATH 4300 ***3 cr. 3 hr.*** ▲

The course studies algebraic structures, including groups, rings, and fields.

Prerequisites: MATH 2500 or permission of Instructor, and MATH 2600.

Complex Analysis

MATH 4350 ***3 cr. 3 hr.*** ▲

The course covers the following topics: the complex number system, the analysis of complex functions, analytic functions, integration, series, contour integration, and conformal mappings.

Prerequisite: MATH 3300.

Operations Research

MATH 4400 ***3 cr. 3 hr.*** ▲

The course covers the following topics: linear programming, duality, networks, transportation problems, dynamic programming, and stochastic models.

Prerequisites: MATH 2600 and MATH 2400.

Mathematical Modeling

MATH 4450 ***3 cr. 3 hr.*** ▲

Deterministic and probabilistic models from the physical, social, and life sciences are studied. The course emphasizes the uses of mathematics, rather than the acquisition of new mathematical knowledge. New mathematical ideas are introduced only when they aid in the study of a particular application. Q

Prerequisites: MATH 2400, 2600.

Numerical Analysis

MATH 4500 ***3 cr. 3 hr.*** ▲

Numerical analysis is concerned with devising algorithms for approximating the solutions to mathematically expressed problems. Topics are chosen from: round off error and computer arithmetic, solutions of algebraic and transcendental equations, interpolation and polynomial approximation, numerical differentiation and integration, solutions of ordinary differential equations, solutions of linear systems, and approximation theory. Both mathematical rigor and computer solutions are stressed.

Prerequisites: MATH 2600, 3300, programming ability in a numerical program language (e.g. FORTRAN, PASCAL).

Methods and Materials in Secondary Mathematics

MATH 4850 ***3 cr. 3 hr.*** ▲

The curriculum and pedagogy of secondary school mathematics is studied. The course includes a 30 hour pre-practicum of professional experiences.

Prerequisites: MATH 2400 and 2600.

Mathematics Practicum in a Secondary School

MATH 4860 ***6 cr.*** ▲

Students are assigned to cooperating schools for one-half of one semester of student teaching.

Prerequisite: permission of the department.

Mathematics Practicum in a Secondary School II

MATH 4870 ***6 cr.*** ▲

Students are assigned to cooperating schools for one-half semester of student teaching.

Prerequisites: MATH 4860 and permission of the department.

Independent Study

MATH 4900 ***1, 2, 3 cr.*** ▲ ●

Prerequisite: permission of the department.

Topics in Mathematics

MATH 5000 ***3 cr. 3 hr.*** ▲ ●

Courses having a more narrow focus or those taught on an irregular basis may be offered under the "Topics" heading. New courses may also be taught on an experimental basis under this title.

Prerequisite: Permission of the department.

Military Science

▲ Undergraduate Day School
● Undergraduate Evening School

Introduction to Army ROTC

MILS 1400 ***1 cr. 1 hr.*** ▲

The history, purpose, structure, and methods of the Army ROTC program are introduced in this course. The leadership and management responsibilities of an officer are presented. Emphasis is placed on ROTC and its relationship with the United States Army.

Introduction to the United States Army

MILS 1500 ***1 cr. 1 hr.*** ▲

This course provides an overview of the role of the "Total Army" within the framework of the national defense establishment. The integrated roles of the Active Army and the Reserve Components are examined. Emphasis is placed on the duties and responsibilities of the officer serving in the combat arms, combat support, and combat service support branches.

Land Navigation and Basic Tactics

MILS 2000 ***2 cr. 2 hr.*** ▲

Students learn the basic fundamentals necessary to navigate. In Land Navigation, students identify terrain features, find locations, determine directions, and plan routes. Maps, protractors, compasses, terrain boards, and audio-visual aids are utilized extensively. The students also receive an introduction to individual tactical techniques and to small unit organization and utilization. Practical exercises are employed to give students hands-on experience in movement techniques and the tactical employment of small units.

Emergency Medical Treatment/Basic Tactics

MILS 2200 ***2 cr. 2 hr.*** ▲

The first half of the course presents casualty evaluation, treatment, and evacuation under emergency conditions. Emphasis is on injury prevention under different climatic conditions and on the Cardiopulmonary Resuscitation (CPR) Technique. The second half of the course familiarizes the students with individual, buddy team, and squad tactics. These basic fundamentals are reinforced and built upon throughout the student's tenure in the Army ROTC program.

Advanced Theory of Unit Operations

MILS 3100 ***3 cr. 3 hr.*** ▲

This course provides continuing study of effective leadership in tactical operations, culminating the lessons learned during previous courses. Students examine the theory and dynamics of the military team and its effective employment as part of the combined arms concept.

Prerequisite: completion of Basic Course or advanced placement credit granted by the Professor of Military Science.

Leadership

MILS 3300 ***3 cr. 3 hr.*** ▲

The course studies the psychology of leadership based on an organizational model. Emphasis is placed on individual, group, transactional, and organizational factors that both a leader and manager need to consider in order to be maximally effective. The student is provided with the essentials for forming a creative, personal management and leadership philosophy for practical application in a real world setting.

Prerequisites: completion of Basic Course or advanced placement credit granted by the Professor of Military Science.

Effective Communication

MILS 4200 ***3 cr. 3 hr.*** ▲

The course is designed to enhance the communication skills of the Army Officer. Emphasis is on the Army writing style, conducting briefings, and the Army Training Management System. Effective speaking, listening, writing, and military correspondence is studied, with an emphasis on the interrelationship of staff and command assignments, for the effective utilization of people and resources.

Prerequisite: completion of Basic Course or advanced placement credit granted by the Professor of Military Science.

Law, Ethics, and Preprofessional Seminar

MILS 4300 ***3 cr. 3 hr.*** ▲

This course provides the student with an introduction to Military Law and Military Professional Ethics. The role of the junior officer with regard to military law in the practical setting of his/her initial assignment in an Army unit is examined. This course provides the Advanced Course cadet with a basic knowledge of the Army's organizational practices and philosophy. The role of the noncommissioned officer is reviewed along with the basics of line and staff functions. An overview of the Army's personnel management, training, and logistics systems, along with post and installation support organization and functions are presented as a Basic Course.

Prerequisite: completion of Basic Course or advanced placement credit granted by the Professor of Military Science.

Music

Key to Course Offerings

Q: designates courses in the Quantitative Scientific Cluster

I: the Ideas and Events Cluster

B: the Human Behavior Cluster

L: the Literature, Language and Arts Cluster

C: Multicultural

IDIS: Interdisciplinary courses

Multicultural and interdisciplinary courses also fulfill a cluster designation.

* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

Art of Music

MUSC 1000 ***3 cr. 3 hr.*** ▲ ●

This course approaches the study of music as an aesthetic experience. Representative styles and categories from the Middle Ages to the present are explored. Students are required to attend professional concerts. L, C

Commonwealth of the Arts

MUSC 2000 ***3 cr. 3 hr.*** ▲ ●

Music's reflection of the values and ideals of societies past and present are explored. Inter-relationships among the fine arts disciplines are examined. L, I, B, C, IDIS

Commonwealth of Ancient Arts

MUSC 2100 ***3 cr. 3 hr.*** ▲ ●

An interdisciplinary study of the humanities in ancient Western and non-Western cultures. A systematic overview of painting, sculpture, architecture, music, literature, drama, and philosophy in a historical context of significant cultures, including Paleolithic, Neolithic, Mesopotamian, Egyptian, Greek, Roman, Chinese, Indian, and American. Influences among these and other cultures will be presented. L, I, C, IDIS

Basic Music Theory

MUSC 2200 ***3 cr. 3 hr.*** ▲

The course examines rhythmic notation, including meters and tempo. Emphasis is placed on melodic notation, including intervals, scales, and keys. Dynamics, an introduction to key relationship, transpositions, as well as other selected topics are covered. L

Symphony

MUSC 3100 ***3 cr. 3 hr.*** ▲

Structural and stylistic characteristics of the symphony from the 18th century to the present are studied.

Prerequisite: MUSC 1000 or MUSC 2200.

Opera

MUSC 3200 ***3 cr. 3 hr.*** ▲

Students study several works from the standard operatic repertoire. Some significant trends in modern opera are discussed. L

Prerequisite: MUSC 1000 or MUSC 2200.

Twentieth-Century Music

MUSC 3400 ***3 cr. 3 hr.*** ▲

The course examines the idioms and aesthetic notions of the present century, together with their relationship to the past. L, C

Prerequisite: MUSC 1000 or MUSC 2200.

American Music

MUSC 3500 ***3 cr. 3 hr.*** ▲

The course surveys American music from colonial times with some emphasis on "popular" and "Art" music of the present century in the U.S. L, C

Baroque and Classical Music

MUSC 3600 ***3 cr. 3 hr.*** ▲

The class examines various composers from Monteverdi to Beethoven. Topics covered in the course include opera, oratorio, passion, cantata, sonata forms, dance forms, and shifting aesthetic views. L

Prerequisite: MUSC 1000 or MUSC 2200.

19th Century Music

MUSC 3700 ***3 cr. 3 hr.*** ▲

The class presents a survey of major forms of 19th century music from Beethoven to Mahler. L

Prerequisite: MUSC 1000 or MUSC 2200.

History of Jazz

MUSC 3800 ***3 cr. 3 hr.*** ▲

This course introduces students to the history of jazz and investigates the musical elements that make up jazz. The role of jazz in American history is explored, and various musical trends that contributed to jazz are traced. L, C

Women, Music, and Society

MUSC 3900 ***3 cr. 3 hr.*** ▲

This course looks at the contributions of significant women in music. Compositions by women from different cultures are examined as a reflection of the social, political and economic conditions. Elements of form, structure, and historical style are studied from antiquity to modern times in musical genres such as symphony, opera, chamber music, song, and solo repertoire. L

Choral Arts

MUSC 4000 ***1 cr. 2 hr.*** ▲

The course involves singing choral music from the past and the present, including dramatic music. No more than six semester hours are applicable toward graduation. (See MUSC 4100.) L

Instrumental Arts

MUSC 4100 ***1 cr. 2 hr.*** ▲

Small and large ensembles play representative works including band and jazz ensemble literature. No more than six semester hours of MUSC 4100 or any combination of MUSC 4100 and MUSC 4000 are applicable toward graduation. L

Class Piano

MUSC 4200 ***1 cr. 2 hr.*** ▲ ●

The class involves practical keyboard uses in classroom work, activities include accompaniment, simple transposition, and harmonization of melodies at the keyboard. L

Class Voice

MUSC 4300 ***1 cr. 2 hr.*** ▲

The principles of voice production are studied. Breath control, phrasing, resonance, and diction are stressed. L

Harmony I

MUSC 4500 ***3 cr. 3 hr.*** ▲

The course involves the harmonization of simple melodies and studies principles of modulation and key relationships. L

Prerequisite: MUSC 2200.

Harmony II

****MUSC 4510*** ***3 cr. 3 hr.*** ▲

The course covers further work in modulation, including chromaticism and 19th and early 20th century developments.

Prerequisite: MUSC 4500 or equivalent. L

Independent Study in Music

MUSC 4901 ***1 cr. 1 hr.*** ▲ ●

Independent Study in Music

MUSC 4902 ***2 cr. 2 hr.*** ▲ ●

Independent Study in Music

MUSC 4903 ***3 cr. 3 hr.*** ▲ ●

Internship in Music

MUSC 4940 ***3 cr. 3 hr.*** ▲

Topics in Music

MUSC 5000 ***3 cr. 3 hr.*** ▲ ●

Courses having a more narrow focus or those taught on an irregular basis may be offered under the "Topics" heading. New courses may also be taught on an experimental basis under this title.

Nursing

Key to Course Offerings

* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

Introduction to Nursing

NURS 1010 ***1 cr. 1 hr.*** ▲

This course examines the role of professional nurses within the health care system. The nurse as a promoter of health and differing views of health and illness are also explored.

Prerequisite: none, open to any major.

Scientific Foundations for Nursing—Interventions I

NURS 2000 ***2 cr. 2 hr.*** ▲

Selected basic alterations in health and physiology underlying nursing assessment, diagnosis, and intervention are discussed. This is the first course in a two-semester sequence.

Prerequisites: BIOL 1200 and 1300, CHEM 1200.

Scientific Foundations for Nursing—Interventions II

NURS 2100 ***2 cr. 2 hr.*** ▲

Selected basic alterations in health and physiology underlying nursing assessment, diagnosis, and intervention are discussed. This is the second course in a two-semester sequence.

Prerequisite: NURS 2000.

Nutritional Foundations for Nursing Interventions

NURS 2200 ***3 cr. 3 hr.*** ▲

This course examines concepts from nutrition science and their application to self-care and client care. The collaborative role of nurse and dietitian is also explored.

Prerequisites: BIOL 1200 and 1300, CHEM 1200 or permission of Instructor.

Contemporary Issues in Women's Health

NURS 2340 ***3 cr. 3 hr.*** ▲

This elective course considers issues in women's health from socialization in infancy through the powerlessness and isolation of old age. Emphasis is placed on understanding women's unique health problems and on societal forces that shape health perceptions and care of women. Health promotion is stressed, and ways in which women may assume control of their health management is explored. IDIS, C Note: if minoring in Women's Studies, see advisor for course sequencing.

Nursing Process with the Well Client I

NURS 2700 ***5 cr. 9 hr.*** ▲

The content of the course deals with theoretical and methodological nursing concepts for practice with well clients. Clinical practice includes psychomotor skills, physical assessment, health promotion and maternity/newborn care. This is the first course in a two-semester sequence.

Prerequisites: ENGL 1200, PSY 1100, SOC 1100, BIOL 1200 and 1300, CHEM 1200. Pre or corerequisites: NURS 1010, NURS 2000, NURS 2200, PSY 2200.

Nursing Process with the Well Client II

NURS 2800 ***5 cr. 9 hr.*** ▲

The content of the course deals with theoretical and methodological nursing concepts for practice with well clients. Clinical practice includes psychomotor skills, physical assessment, health promotion, and maternity/newborn care. This is the second course in a two-semester sequence.

Prerequisites: NURS 2000, NURS 2200, NURS 2700, PSY 2200. Pre or corerequisite: BIOL 2700, NURS 2100.

Nursing Care of the Child Bearing Family

NURS 2910 ***4 cr. 4 hr.*** ▲

This course for Registered Nurse students examines current concepts and nursing interventions for the care of prenatal, intrapartal, and postpartal women and neonates. (RN students are exempt by exam).

Prerequisites: ENGL 1200, BIOL 1200 and 1300, BIOL 2700, CHEM 1200, PSY 2200, SOC 1100.

Pharmacological Basis for Nursing Interventions

NURS 3100 ***2 cr. 2 hr.*** ▲

This course deals with principles of pharmacology needed for professional nursing practice. Interrelationships among drug action, disease process, and client are the basis for exploring therapeutic effectiveness. Selected drug classifications and prototypes are used to structure content. Legal constraints and ethical issues are explored.

Prerequisites: NURS 2800, NURS 2100, BIOL 2700 or permission of the Instructor.

Concepts of Nursing I

NURS 3500 ***3 cr. 5 hr.*** ▲

The evolution and development of theoretical models of nursing as well as other historical precedents are investigated and the interrelationship among the basic concepts of person, environment, health, and nursing are studied. The focus of the clinical component is utilization of the functional health pattern format to assess the health status of clients and the development of a nursing history. This is one of two courses designed to provide advance placement for the registered nurse student that can be taken either semester or concurrently with Nursing Concepts II.

Prerequisite: Nursing Mobility Profile II.

Concepts of Nursing II

NURS 3600 ***3 cr. 5 hr.*** ▲

Selected nursing diagnoses within the format of functional health patterns are addressed. Students are provided the opportunity to explore the interdependence of the multiple elements of the nursing process applied to selected case studies. Experience in the campus laboratory and with selected clients provides the student with the opportunity to demonstrate competence in psychomotor skills related to health and physical assessment. This is one of two courses designed to provide advance placement for the registered nurse student that can be taken either semester or concurrently with Nursing Concepts I.

Prerequisite: Nursing Mobility Profile II.

Nursing Process with Clients Experiencing Health Alterations I

NURS 3700 ***10 cr. 18 hr.*** ▲

Critical thinking skills are developed through application of the nursing process to clients with common health problems. Practice opportunities are offered in selected acute care facilities. This is the first course in a two-semester sequence.

Prerequisites: NURS 2800, NURS 2100, BIOL 2700, and Basic Math Competency Pre or corerequisite: NURS 3100.

Nursing Process with Clients Experiencing Health Alterations II

NURS 3800 ***10 cr. 18 hr.*** ▲

Critical thinking skills are developed through application of the nursing process to clients with common health problems. Practice opportunities are offered in selected acute care facilities. This is the second course in a two-semester sequence.

Prerequisites: NURS 3100, NURS 3700.

Nursing Care of the Mentally Ill Client

NURS 3910 ***4 cr. 4 hr.*** ▲

This course for Registered Nurse students examines current concepts and nursing measures in the care of clients with selected alterations in mental health. (RN students are exempt by exam).

Prerequisites: ENGL 1200, BIOL 1200 and 1300, BIOL 2700, CHEM 1200, PSY 2200, SOC 1100.

Nursing Care of the Child

NURS 3920 ***4 cr. 4 hr.*** ▲

This course for Registered Nurse students examines current concepts and nursing measures in the care of children from infancy through adolescence. (RN students are exempt by exam).

Prerequisites: ENGL 1200, BIOL 1200 and 1300, BIOL 2700, CHEM 1200, PSY 2200, SOC 1100.

Nursing Care of the Adult

NURS 3930 ***7 cr. 7 hr.*** ▲

This course for Registered Nurse students examines current concepts and nursing measures in the care of adult clients with selected common health problems. (RN students are exempt by exam).

Prerequisites: ENGL 1200, BIOL 1200 and 1300, BIOL 2700, CHEM 1200, PSY 2200, SOC 1100.

Nursing Research

NURS 4000 ***2 cr. 2 hr.*** ▲

This course prepares students as knowledgeable research consumers. Nursing students identify and explore research problems.

Prerequisites: MATH 1700. Pre or corerequisite: NURS 3600 or NURS 3800.

Nursing Process with Families, Groups, and Communities

NURS 4700 ***6 cr. 12 hr.*** ▲

This course focuses on systems concepts as a basis for applying the nursing process with aggregate clients in the community. Primary, secondary, and tertiary prevention is the basis for interventions in a variety of distributive care settings. Special emphasis is placed on the older adult group.

Nursing Process in Home Health Care

NURS 4750 ***4 cr. 8 hr.*** ▲

This course focuses on the application of nursing process with individuals and families in the home health care setting. Emphasis is placed on primary, secondary, and tertiary prevention.

Nursing Process in a Selected Practicum

NURS 4800 ***10 cr. 26 hr.*** ▲

This capstone course offers opportunities for in-depth exploration of an area of nursing interest. Nursing process with clients experiencing complex health problems, leadership and management principles, and professional issues are integrated into clinical practice. A preceptor model is used to facilitate increased independence in professional practice.

Prerequisites: NURS 4000, NURS 4700, or 4710, 4720.

Leadership and Management Concepts for Nursing Practice

NURS 4850 ***2 cr. 2 hr.*** ▲

This course examines concepts underlying professional career development in nursing. The roles of the nurse as manager of client care, as part of a health care institution hierarchy, and as a member of a professional collective are explored.

Prerequisites: NURS 4700 or permission of Instructor.

Independent Study

NURS 4901 ***1 cr. 1 hr.*** ▲

Independent Study

NURS 4902 ***2 cr. 3 hr.*** ▲

Topics in Nursing

NURS 4903 ***3 cr. 3 hr.*** ▲
NURS 5000 ***3 cr. 3 hr.*** ▲

Courses having a more narrow focus or those taught on an irregular basis may be offered under the "Topics" heading. New courses may also be taught on an experimental basis under this title.

Occupational/Vocational Education

Key to Course Offerings

* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

These courses are only offered through Continuing Education.

Teaching Methods: Instructional Strategies in Vocational Technical Education

OCED 5515 ***3 cr.*** ●

Theories and techniques of instruction are examined. Topics covered include proficiency in the application of learning theories, strategies, techniques and the methodology involved in the delivery of specific courses of study. Additional themes include the competency-based vocational technical lessons, lesson plan design, developing behavioral standards, classroom management and the coordination and evaluation of student learning.

Note: This is a required course for candidates seeking Massachusetts Department of Education approval as a Vocational Technical Instructor.

Teaching Methods: Educating the Vocational Technical Learner

OCED 5516 ***3 cr.*** ●

This course refines the teaching/learning skills introduced in OCED 5515. Micro teaching and video tape replay review strengthen and foster effective teaching in the secondary vocational technical classroom. The requirements of chapter 74 (as amended by chapter 731) as they impact upon the laboratory/classroom setting are explored. Other topics covered include student disciplinary and safety concerns and the identification and utilization of curriculum resources.

Note: This is a required course for candidates seeking Massachusetts Department of Education approval as a Vocational Technical Instructor.

Fundamentals of Vocational Technical Education

OCED 5517 ***3 cr.*** ●

This course examines the history and philosophy of vocational technical education. The present state of Federal vocational education; Chapter 731, Child Labor Laws; Chapter 622 and Title IX; and Chapter 766, State Vocational Council is covered. Additionally the course studies The National Center for Research in Vocational Education; and Federal Vocational Education Regulations.
Note: This is a required course for candidates seeking Massachusetts Department of Education approval as a Vocational Technical Instructor.

Management of the Vocational Technical Education Environment

OCEO 5518 ***3 cr.*** ●

This course examines laboratory, academic, and related classroom and cooperative placement site safety. Emphasis on developmental psychology, adolescent psychology, learning styles, and discipline strategies addresses the needs of adolescents, students with special needs, disadvantaged youth, nontraditional students, linguistic minorities, and other priority populations. Also studied are student organizations, record keeping and data coordination, advisory committees, and communication networking.
Note: This is a required course for candidates seeking Massachusetts Department of Education approval as a Vocational Technical Instructor.

Students with Special Needs in Vocational Technical Education

OCEO 5523 ***3 cr.*** ●

This course traces the development of Special Needs Programs with emphasis on the identification and understanding of special needs students in vocational schools. Particular attention is given to teaching techniques and administrative organization patterns utilized in a vocational school.
Note: This is a required course for candidates seeking either Massachusetts Department of Education approval as a Vocational Technical Instructor or Special Ed/Voc Ed Mini-approval.

Promoting Positive Social Behavior for Students with Special Needs in Vocational Education

OCEO 5524 ***3 cr.*** ●

The course provides familiarity with the continuum of services required for students with special needs in all school settings. The modifications of approach and teaching techniques which make vocational education accessible to all students are discussed in depth. A Case Study is required of each student in the course.

Strategies and Methods for Teaching Special Needs Students Re: Vocational Education

OCEO 5525 ***3 cr.***

A practical approach to planning instruction for special needs students in the regular class within a vocational school setting. Using a framework for applying theory in practice, teachers develop and/or attempt strategies that are applicable to their classrooms.

Implementation and Evaluation of Education Plans for Students with Special Needs

OCEO 5526 ***3 cr.*** ●

The course provides experience in interpreting educational prescriptions for implementation within vocational training programs. Each student designs an individualized instructional plan describing all materials, recommended methodology and techniques of evaluation.

Seminar and Practicum in Vocational Education/Special Education

OCEO 5527 ***3 cr.*** ●

Students complete a practicum or internship in an approved setting for individuals with special needs. Students are assisted in implementing the various facets of their role within a given setting. Visitations are planned not only to observe the competencies being demonstrated but to meet with school administrators in defining the role and functions. Practicum seminar is designed to assist the total group in dealing with current concerns and issues and to allow students to learn from the experiences of each other.

Competency Based Vocational Technical Curriculum Development

OCEO 5529 ***3 cr.*** ●

This course is designed to enable teachers to identify competencies within their respective vocational technical program areas. It further discusses techniques to enable teachers to develop, evaluate, and verify competencies.
Note: This is a required course for candidates seeking Massachusetts Department of Education approval as a Vocational Technical Instructor.

Supervised Practicum in Vocational Education

OCEO 5534 ***3 cr.*** ●

A practicum is a modified teaching placement in a vocational technical school or equivalent field-based experience. Candidates function as "pre-approved" instructors with responsibility for demonstrating ability to implement various teaching models, familiarization with school policies, classroom management techniques, and the coordination of educable training resources. Teaching is supervised by a cooperating teacher and monitored and evaluated by a college instructor. Practicum participants design competency-based lesson plans, participate actively in seminar discussions, and complete a research assignment on educational reform. Eligible practicum time requirements: 5 hours/day x 3-4 days x 6 weeks.
Note: This is a required course for candidates seeking Massachusetts Department of Education approval as a Vocational Technical Instructor.

Implementing a Competency Based Curriculum

OCED 5539 ***3 cr.*** ●

This course is designed to provide teachers the tools needed to successfully implement a competency based program. Teachers demonstrate competency in revising learning guides and task listings. A management system to evaluate student achievement and maintain competency profiles is examined. Teachers are introduced to the principles of integrated and applied learning to assist them in bridging the vocational and academic competencies required by their students. Activities culminate in the production of a revised/adapted curriculum for a specific vocational technical program area.
Note: This is a required course for candidates seeking Massachusetts Department of Education approval as a Vocational Technical Instructor.

Computerized Vocational Technical Curriculum Management

OCED 5545 ***3 cr.*** ●

This course is designed to introduce the vocational technical educator to the microcomputer as a tool for curriculum, classroom record keeping, and planning. Students adapt, modify, and incorporate the excellent curricular resources developed within Massachusetts, including CBVE, MSCP, and others into practical learning applications utilizing the computer. In addition to hands-on experience with a microcomputer, the course enables participants to blend classroom and laboratory learning with an emphasis on integrated software and its application within a vocational technical setting.
Note: This is a required course for candidates seeking Massachusetts Department of Education approval as a Vocational Technical Instructor.

Integrated Vocational Technical and Academic Curriculum

OCED 5546 ***3 cr.*** ●

This course shares, explores, and investigates Massachusetts developed curricular resources, including CBVE, MSCP, Model Academic Project, LAPS, as well as nationally devised curriculum, including Principles of Technology, CBE, and others. This learning activity examines the eight methods (academic infusing, cross articulation, vocational/technical relevance, content alignment, the academy model, specialized courses/programs, employability/career path skills and the culminating/senior project) for integration identified by the National Center for Research in Vocational Education at the University of California at Berkeley.
Note: This is a required course for candidates seeking Massachusetts Department of Education approval as a Vocational Technical Instructor.

Brain Compatibility: Teaching and Learning

OCED 5547 ***3 cr.*** ●

Researchers have learned more about the brain and learning in the last decade than in previous recorded history. This course is designed to provide educators with a review of brain research relevant to learning styles on any grade level and to allow teachers to apply specific brain compatible methods in their classroom and laboratory situations. This area of study is critical to the task of serving students properly. Proficiency in applying brain research to the planning and delivery of instruction is gained through this course.
Note: This is a required course for candidates seeking Massachusetts Department of Education approval as a Vocational Technical Instructor.

Assessment Standards and Evaluation

OCEO 5549 ***3 cr.*** ●

Participants explore strategies for establishing student performance criteria, assessing student knowledge and attitudes, evaluating hands-on skills and determining student grades. Topics include identifying and examining existing standards and social equity in educational assessment. Methods for linking competency designed instructional objectives to evaluation and measuring instruments are reviewed, including factors related to reliability and range.
Note: This is a required course for candidates seeking Massachusetts Department of Education approval as a Vocational Technical Instructor.

Topics in Voc/Occ Education

OCEO 5560 ***3 cr.*** ●

Courses having a more narrow focus or those taught on an irregular basis may be offered under the "Topics" heading. New courses may also be taught on an experimental basis under this title.

Advanced Computerized Vocational Technical Curriculum Management

OCED 5595 ***3 cr.*** ●

This course provides an orientation and application of Lotus 1-2-3 for the vocational technical setting. This software is a recognized leader in the microcomputer spreadsheets market with its ease of use, size, and power. Students learn through hands-on experience how to plan, design, implement and perform analysis utilizing a microcomputer and Lotus 1-2-3. Additionally, a historical view of spreadsheets and their impact on the manner in which effective organizations operate in the planning, creating, saving, and printing of data is emphasized. Participants interpret data using database functions and by creating and printing graphs.
Note: This course may be used as a computer science cluster requirement.

Philosophy

Key to Course Offerings

Q: designates courses in the Quantitative Scientific Cluster

I: the Ideas and Events Cluster

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▲ Undergraduate Day School

● Undergraduate Evening School

Introduction to Western Philosophy

PHIL 1000 ***3 cr. 3 hr.*** ▲ ●

The course serves as an introduction to the problems, methods, and goals of classical and contemporary Western Philosophy. Emphasis is placed upon how these differ from and relate to other fields of human knowledge. I

Logic

PHIL 1100 ***3 cr. 3 hr.*** ▲ ●

The course introduces techniques for analyzing the structure and validity of arguments in a natural language, such as English, as well as the concepts and principles of validity. Emphasis is on truth-functional and quantification inference, and a procedure in formal systems. L, Q, IDIS.

Philosophy of Education

PHIL 2000 ***3 cr. 3 hr.*** ▲ ●

This course seeks to trace the origin and development of major educational theories and their contemporary implications. I

Theories of Knowledge

****PHIL 2200*** ***3 cr. 3 hr.*** ▲

The problems and methods of human knowledge are explored. Theories are presented in the light of idealism, realism, pragmatism, and existentialism.
Prerequisite: PHIL 1000.

American Philosophy

****PHIL 2440*** ***3 cr. 3 hr.*** ▲

The course presents a study of American thought from the Colonial Period to the present. I

Contemporary Ethical Problems

PHIL 2500 ***3 cr. 3 hr.*** ▲ ●

The nature of values and morality. Application of ethical theory to such controversial moral issues as criminal punishment and the death penalty, abortion, euthanasia and suicide, the ethical treatment of animals, poverty and the distribution of wealth, prejudice and discrimination, affirmative action, civil disobedience, and war. I

Contemporary Ethical Systems

PHIL 2550 ***3 cr. 3 hr.*** ▲

A critical examination of the major ethical theories in classical and contemporary philosophy including Aristotle's perfectionism, Aquinas' natural law ethics, Kant's deontological ethics, Bentham and Mill's utilitarianism, existentialism, emotivism, and personalism. Topics covered include values and facts; morality and ethics; objectivism, subjectivism, and relativism; ethics and science; and ethics and religion. I

Philosophy of Human Nature

PHIL 2600 ***3 cr. 3 hr.*** ▲ ●

The course provides an exploration of human nature or personhood from the triple perspectives of philosophy, religion, and behavioral science. The class focuses on the following thinkers and movements: Plato, Christianity, early modern individualism, Marxism, Freud, existentialism, Frankl's logotherapy, Skinner, Fromm's humanism and personalism. I, B, IDIS.

Man and Nature I

****PHIL 2650*** ***3 cr. 3 hr.*** ▲

This course is based, in part, on the Ascent of Man film series by Jacob Bronowski. It covers a broad range of topics centering on those discoveries, ideas, and events that have been crucial to the development of modern civilization. The origin of man, ancient civilizations, early mathematics, and astronomy are among the topics covered.

Man and Nature II

****PHIL 2660*** ***3 cr. 3 hr.*** ▲

The course is a continuation of PHIL 4650 covering the period from the trial of Galileo to the present, dealing with such topics as evolution, nuclear physics, the theory of relativity, and the human brain.

Ancient and Medieval Philosophy

PHIL 3310 ***3 cr. 3 hr.*** ▲

The course studies the beginnings of Western Philosophy, including the pre-Socrates, Plato, Aristotle, and several other thinkers of the period. I
Prerequisite: PHIL 1000.

Renaissance and Modern Philosophy

****PHIL 3330*** ***3 cr. 3 hr.*** ▲

The course explores trends of thought from fourteenth century nominalism through the Renaissance to Continental Rationalism and British Empiricism. I
Prerequisite: PHIL 1000.

Contemporary Philosophy

PHIL 3340 ***3 cr. 3 hr.*** ▲

The course provides an examination of some current trends and issues in contemporary American, British, and European philosophy. I, IDIS
Prerequisite: PHIL 1000.

Philosophy of Religion

****PHIL 3600*** ***3 cr. 3 hr.*** ▲ ●

The nature of religious experience and the problem of God's existence as seen in classical Western theism and process philosophy. Differences between Western and Eastern religion, and between religion and science. I
Prerequisite: PHIL 1000.

World Religions

PHIL 3610 ***3 cr. 3 hr.*** ▲

This course studies the principal world religions, including Buddhism, Christianity, Islam, Hinduism, and Judaism. Emphasis is placed on their basic tenets and insights into spiritual values. I, C

Philosophy of Art

****PHIL 4100*** ***3 cr. 3 hr.*** ▲

The nature of beauty and aesthetic experience, especially as embodied in the arts. Relation of aesthetic experience to moral and technological experience. Survey and critical evaluation of different theories of aesthetics in Western philosophy. Synthesis of subjective and objective theories. I

Political and Social Philosophy

PHIL 4200 ***3 cr. 3 hr.*** ▲

The course examines the various political and social ideas beginning with Plato and continuing to Marx.
Prerequisite: PHIL 1000.

Philosophy of Science

***PHIL 4300** **3 cr. 3 hr.** ▲

The course analyzes the methods and goals of the physical sciences, how they differ from the social sciences, and the philosophic problems encountered in scientific pursuits.

Philosophy of Language

***PHIL 4400** **3 cr. 3 hr.** ▲

This course is the study of theories about structure and meaningfulness of language, especially in twentieth century Anglo-American thought. I

Prerequisite: PHIL 1000.

Marxism

***PHIL 4430** **3 cr. 3 hr.** ▲

Origins, development, and contemporary application of Marx's thought are explored. The course attempts to provide an understanding of society and history by a philosophy identified with political economy. I, IDIS.

Prerequisite: PHIL 1000.

Philosophy of Love

PHIL 4500 **3 cr. 3 hr.** ●

The course analyzes the concept "love" as employed in the social and moral philosophies of various classical and contemporary thinkers. I

Ethical Issues in Business

PHIL 4700 **3 cr.** ●

The first objective of the course is to develop proficiency in the identification and analysis of ethical issues as they arise in business. The second objective is to acquaint the student with some specific ethical problems currently faced by business men and women: whistle-blowing, discrimination, truth in advertising, product safety and the environment. Both theoretical and actual cases are studied as well as two current ethical theories. I

Independent Study

PHIL 4903 **3 cr. 3 hr.** ▲ ●

The Independent Study is open to students who have permission of the supervising instructor and the Department chairperson. Course of study, meetings, and credit are arranged with approval.

Topics in Philosophy

PHIL 5000 **3 cr. 3 hr.** ▲ ●

Courses having a more narrow focus or those taught on an irregular basis may be offered under the "Topics" heading. New courses may also be taught on an experimental basis under this title.

Physical Education

Key to Course Offerings

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▲ Undergraduate Day School

● Undergraduate Evening School

The courses in Physical Education are identified as Group 1, 2, 3 and Professional to designate the course options for fulfillment of the Health and Fitness requirement in the Liberal Arts and Sciences Programs. One course from Group I or three courses from Group II or two courses from Group II and one course from Group III meet this requirement. Some courses in Group I are also professional.

Group I

Health and Fitness

PHED 1000 **3 cr. 3 hr.** ▲ ●

The course provides a basic survey of the effects of diet, exercise, and selected environmental agents on the mental and physical health of humans. Topics may include body build and body composition, fitness evaluation and programming, nutritional considerations, psychological correlates of health, chemical alterations, human sexuality, and personal and public health.

Adaptations

PHED 3050 **3 cr. 3 hr.** ▲

The human organism is examined in terms of its adaptation to acute and chronic stress. Physiological responses to such stressors as exercise, heat, and darkness, altitude, and nutrition are studied theoretically and in a laboratory setting.

Exercise, Nutrition, and Heart Disease

PHED 3060 **3 cr. 3 hr.** ▲ ●

This course is designed to examine the integrative relationships inherent in the study of exercise, nutrition, and heart disease. Body build and body composition assessments are made, exercise prescriptions and programs are developed, and prevalent controversies in the areas of obesity, dietary goals, guidelines and plans, atherosclerosis, and heart disease are discussed.

Exercise Physiology

***PHED 3070** **3 cr. 4 hr.** ▲

This course focuses upon two basic physiologic systems: the energy yielding (metabolic) and cardiorespiratory. These systems are studied as to how they respond to the stressors of exercise and environmental extremes (altitude, heat, cold). Applied topics such as nutrition for performance, body composition, and prescribing exercise for healthy adults and athletes are discussed. The purpose of the lab portion of the course is to expose the student to the tools used by the exercise physiologist to answer applied questions about the physiologic responses to exercise.

Group II

Jogging: Theory and Practice

PHED 2000 **1 cr. 2 hr.** ▲

The theories and practices of cardiovascular conditioning using jogging as the activity mode are presented. Pre-post cardiovascular and body composition evaluations are made and program prescriptions are designed. Topics covered include training principles and programs, energy sources, aerobic and anaerobic processes, nutrition, exercise and weight control, exercise training effects, psychological considerations, environmental conditions, injuries, and running.

Consumer Health

PHED 2030 **1 cr. 2 hr.** ▲

This course is designed to help the student evaluate health information critically, and select products and services wisely. The past, present, and future of quackery is explored especially in the areas of food, cosmetics, and chronic disorders. Laws and protection agencies, both governmental and private, are surveyed.

Diet, Exercise, and Weight Control

PHED 2040 ***1 cr. 2 hr.*** ▲

The course is designed for those interested in weight loss or weight maintenance through the medium of diet and exercise. After an initial assessment of body composition, aerobic fitness, muscular fitness, and the establishment of dietary goals, each student works toward body weight goals through actual programs of exercise and diet.

Body Shaping

PHED 2070 ***1 cr. 2 hr.*** ▲

The theory of weight training and diet in relation to body shaping is discussed. Each student undergoes physique, body composition, aerobic fitness, and muscular strength evaluations before and after a weight training program.

Weight Training for Athletes

PHED 2080 ***1 cr. 2 hr.*** ▲

The course examines theory for the development of muscular strength for specific athletic activities. Anthropometric, body composition, and muscular strength evaluations are assessed prior to and following an individually developed weight training program.

Standard First Aid/Adult CPR

PHED 2090 ***1 cr. 2 hr.*** ▲ ●

A behaviorally oriented course structured for those responsible for the safety and protection of others. Standard First Aid and Adult CPR certificates are issued if the student satisfies all the American Red Cross requirements.

Techniques of Road Racing

PHED 2110 ***1 cr. 2 hr.*** ▲

The purpose of the course is to acquaint the student with various topics of running long distance road races. Topics covered include the physiology of running, training strategies, injury care and prevention, nutritional aspects and methods of assessing running ability. Each student undertakes a training program, serves on a committee to organize a road race, and participates in three road races.

Leadership in the Outdoors

PHED 2120 ***1 cr. 2 hr.***

This course is designed for students in the Leadership Academy. Experiential by design, the course provides students an opportunity to experience and practice a variety of leadership styles through participating in outdoor adventure activities such as: a confidence course, initiative games, orienteering, canoeing and mountain hiking. The inquiry and analysis for the different types of leadership styles will be conducted for both the individual student and the entire class. A weekend adventure will culminate the Leadership in the Outdoor course.

Stress Management

PHED 2120 ***1 cr. 1 hr.***

This course is a multifaceted and holistic approach to the understanding and control of stress in a wellness context. Topics covered include stress psychophysiology, the relationship between stress and illness, life situation and perception interventions, time management, and bioecological stressors. Also, the study and implementation of specific relaxation techniques such as diaphragmatic breathing, progressive relaxation, exercise, autogenics, and mediation will be covered.

Group III

Activity courses are taught on a semester basis. Each semester carries two clock hours and one credit.

PHED 1010 ***Basketball***
PHED 1020 ***Volleyball***
PHED 1040 ***Tennis***
PHED 1050 ***Advanced Tennis***
PHED 1060 ***Badminton***
PHED 1070 ***Karate***
PHED 1080 ***Judo***
PHED 1120 ***Aerobics***
PHED 1130 ***Dance Aerobics***
PHED 1150 ***Canoeing***
PHED 1170 ***Introduction to Mountain Hiking***
PHED 1180 ***Backpacking***
PHED 1190 ***Downhill Skiing***
PHED 1200 ***Cross Country Skiing***
PHED 1210 ***Modern Jazz I***
PHED 1220 ***Modern Jazz II***
PHED 1230 ***Modern Jazz III***
PHED 1250 ***Bicycle Touring***
PHED 1280 ***Orienteering***
PHED 1300 ***Recreational Sports***
PHED 1310 ***Afro Jazz Dance***

Professional Courses

Fundamentals of Coaching

PHED 4000 ***3 cr. 3 hr.*** ▲

An analysis of the principles and practices of coaching in various sports is presented for the prospective teacher/coach.

Recreational Leadership

PHED 4010 ***3 cr. 3 hr.*** ▲

The organization and administration of recreational activities are presented in reference to the development of the principles and practices in both school and community programs.

Camp Counseling

****PHED 4020*** ***3 cr. 3 hr.*** ▲

Course content provides an opportunity to study some of the problems in the field of camping. Emphasis is placed on acquiring essential skills for camp life, developing various leadership styles as a camp counselor, and addressing the individual and group needs of campers.

Physical Education, Fitness and Sport: An Overview

PHED 4030 ***3 cr. 3 hr.*** ▲

This course is designed to provide the student with an overview of the philosophic history, administrative/management patterns, and current professional and academic disciplinary program approaches in physical education, fitness, and sport. Emphasis will be directed towards the new and changing nature of physical education relative to career perspectives.

Motor Learning and Physical Performance

PHED 4040 ***3 cr. 3 hr.*** ▲

This course is designed to provide students with an overview of the study of motor learning and physical performance. Selected motor learning theories and the factors of skill acquisition are covered relative to the physical performance parameters of practice and the applied processes of instruction.

Art of Dance (Arts Credit)

PHED 4050 ***3 cr. 3 hr.*** ▲ ●

This course offers students the opportunity to experience dance aesthetically, kinesthetically, and intellectually. Representative styles from tribal through contemporary dance are covered. Films, movement labs, papers, presentations, concert attendance, and performance are included. Teaching in the After School Movement Program at McKay is an option. L

Outdoor Education

PHED 4060 ***3 cr. 3 hr.*** ▲

This course is designed to explore and experience the use of the outdoors as a medium in the educational process. Topics covered include introduction to outdoor education, teaching methodology, basic principles of high adventure activities, school camping, and outdoor education programs. Students participate in a number of outdoor adventure activities.

Introduction to Dance Movement Therapy

PHED 4070 ***3 cr. 3 hr.*** ▲

The purpose of this course is to study dance therapy and movement processes designed to further physical and emotional. Kinesthetic principles and practices are explored through structured and improvised movement experiences. Effort/Shape Analysis and Chase-Movement Therapy techniques are utilized to enable students to increase their movement ranges, discover their own movement preferences, and develop leadership skills. Teaching in the After School Movement Programs at McKay is recommended.

Physical Education in the Elementary School

PHED 4080 ***1 cr. 2 hr.*** ▲

This theory and practice course is designed to guide the classroom teacher in organizing a comprehensive program of physical education and recreational activities.

Movement Education

PHED 4100 ***3 cr. 3 hr.*** ▲

Movement Education is a theoretical and an experiential course designed for working with the creative process in an interdisciplinary manner. The relationship of movement in developmental processes is explored. Movement experiences, group leadership, curriculum development, and evaluation are covered. Teaching in the After School Movement Program at McKay is recommended.

Programs in Recreation

PHED 4110 ***3 cr. 3 hr.*** ▲

This course is designed to acquaint students with different types of programs in the recreation field. The development of traditional and innovative programs are explored and evaluated in the classroom and through field trips. Topics covered include program foundations, traditional and innovative curricula, program planning, implementation, and evaluation.

Biomechanics of Sport

PHED 4120 ***3 cr. 4 hr.*** ▲

The course involves a study of the anatomical and mechanical aspects that underlie human motion. Anatomical considerations include joint-function and structure, physiology of muscle function, and neuromuscular integration. Mechanical considerations include describing motion in terms of linear and angular acceleration, velocity, and projectiles, and the determination of motion by studying force, inertia, mass, momentum, impulse, friction, buoyancy, center of gravity, stability, and drag and lift. The application of these anatomical and mechanical principles are related to the improvement of performance of selected sports. Q, IDIS

Making Dances: Choreography and Composition

PHED 4130 ***3 cr. 3 hr.*** ▲ ●

Opportunities to develop and analyze the structure and imagery of dances and music are offered. Each participant works improvisationally as choreographer and dancer in the development of solo performances as well as small and large group works. This course includes concert attendance, performance, reading and written assignments. Teaching in the After School Movement Program at McKay is an option. L

Scientific Foundations of Strength Training and Conditioning

PHED 4140 ***3 cr. 3 hr.*** ▲

The course combines the theoretical and practical aspects of strength training and conditioning. Topics covered include exercise and fitness-related principles and practices of physiology, neuromotor control, biochemistry, anatomy, biomechanics, and endocrinology. The development of state-of-the-art, safe, and effective strength and cardiorespiratory endurance training programs is presented.

Psychology of Sport

PHED 4160 ***1 cr. 2 hr.*** ▲

The course provides a basic overview of the psychological impact of sport upon participants and spectators. The areas of motivation, winning and losing, competition, behavior modification, and aggression are explored, and the analysis of reaction profiles used in the observation of emotional behaviors is studied.

Independent Study

PHED 4900 ***1-3 cr.*** ▲ ●

The Independent Study is open to students who have permission of the supervising instructor and the department. Course of study, meetings, and credit are arranged upon approval.

Internship

PHED 4950 ***3-6 cr.*** ▲

The course is designed for Business Administration/Fitness Management majors. The students gain a field experience at an outside agency related to the fitness industry. Assignments are contingent upon the student's abilities, interests, career goals, and acceptance by the cooperating institution. A paper and oral presentation are required.

Topics in Physical Education

PHED 5000 ***1 cr. 1 hr.*** ▲ ●

Courses having a narrow focus or those taught on an irregular basis may be offered under the "Topics" heading. New courses may also be taught on an experimental basis under this title.

Physics

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▲ Undergraduate Day School

● Undergraduate Evening School

Physical Science I

PHYS 1010 **3 cr. 4 hr.** ▲ ●

The emphasis of the course is on the building of conceptual models, problem solving techniques, and the processes of science. The class is recommended for the non-scientist. Q

Physical Science II

PHYS 1020 **3 cr. 4 hr.** ▲ ●

This is a follow up course to Physical Science I (PHYS 1010). It utilizes the same approach to problem solving in science as the first course. Q

Astronomy

PHYS 1030 **3 cr. 3 hr.** ▲ ●

Emphasis of this course is on the properties of stars. The course begins with a description of the internal structure of the earth, its atmosphere, its motions, etc. Moon, its structure and surface features are studied next. After a brief discussion of optical and radio telescopes, the students are introduced to a rudimentary account of physics of stars such as their surface temperatures, distances, their velocities, etc. Sun is studied as a typical star. Binaries and variable stars (cepheids, novae and supernovae, etc.) interstellar medium and finally galaxies round off the course. Q

Environmental Physical Science

****PHYS 1040*** **3 cr. 4 hr.** ▲

The course studies the environment, the effects of pollution on the environment, ecosystems, and natural balance. Relevant background material in physical science is taught as needed.

Prerequisites: Physical Science I, Earth, Sea, and Air, or equivalent.

Physics for the Life Sciences

****PHYS 1150*** **4 cr. 6 hr.** ▲

The class serves as an introduction to Physics. Class work includes a brief treatment of force, work, and energy with an emphasis on the nature of waves, optics, and electricity.

General Physics I

PHYS 1300 **4 cr. 5 hr.** ▲ ●

This is a general college physics course in the principles and practical application of mechanics, waves, sound, and heat. Typical topics covered in class work include description of motions, Newton's laws of motion, Kepler's law of planetary motion, universal gravitation, work and energy, conservation laws, wave motion, sound, temperature, heat, and laws of thermodynamics. Topics discussed in each class may vary depending on students' interests and available laboratory equipment. Students are required to be able to manipulate algebraic equations. Q

General Physics II

PHYS 1400 **4 cr. 5 hr.** ▲ ●

This second-semester general college physics course consists of studies in electricity, magnetism, light, and optics. Topics covered in class work include Coulomb's law, electric force and field, potential and capacitance, electric circuits, magnetic force and field, magnetic forces on a current-carrying conductor, induction, laws of reflection and refraction, mirrors and lenses, optical instruments, interference, diffraction, and polarization of light. Topics discussed in each class may vary depending on students' interests and available laboratory equipment. Students are required to be able to manipulate algebraic equations. Q

General Physics III

****PHYS 2100*** **3 cr. 3 hr.** ▲

This third-semester of general college physics course discusses the inadequacy of classical physics and introduces the theories and models of modern physics. Topics covered in class work include the development of quantum theory as depicted in blackbody radiation, photoelectric effect, and x-rays, the wave function and the uncertainty principle, atomic spectra, Bohr's model of hydrogen, electronic configuration of atoms, the exclusion principle and the periodic table, properties of nuclei, binding energy, radioactivity and the decay processes, radiation hazards, and nuclear reactions. Q

Prerequisite: PHYS 1300 and PHYS 1400.

Intermediate Mechanics

****PHYS 2200*** **3 cr. 3 hr.** ▲

Calculus and delta methods are used in an analytical study of Newtonian mechanics with emphasis on application to nonconservative forces, central forces, and rotational dynamics. Topics covered in class work are linear oscillator, free and forced oscillations, damping, vibrating string, traveling and standing waves.

Prerequisite: PHYS 1300 or equivalent.

Quantum Mechanics

****PHYS 3100*** **3 cr. 3 hr.** ▲

The course examines the inadequacies of classical physics, including the uncertainty principle, Schrodinger equation, physical interpretation of wave function, energy levels, harmonic oscillator, hydrogen atom, and perturbation theory.

Prerequisites: PHYS 2100 and MATH 2400.

Electricity and Magnetism

****PHYS 3200*** **3 cr. 3 hr.** ▲

After a preliminary introduction to vector algebra, electrostatic and magnetostatic fields in vacuum and material media are discussed. Maxwell's equations and propagation of electromagnetic waves are considered.

Statistical Mechanics and Thermodynamics

****PHYS 4100*** **3 cr. 3 hr.** ▲

The course examines the laws of thermodynamics, entropy, Carnot cycle, kinetic theory of gases, Bose and Fermi gases, and low temperature physics.

Prerequisite: PHYS 3100.

Solid State Physics

****PHYS 4200*** **3 cr. 4 hr.** ▲

The course provides a short review of quantum mechanics, including crystal structure magnetism semiconductor theory and specific heat of solids.

Prerequisite: CSC 1600.

Independent Study

PHYS 4900 **1, 2, 3 cr.** ▲

The Independent Study is open to students who have permission of the supervising instructor and the department. The course of study, meetings, and credit are arranged upon approval.

Topics in Physics

****PHYS 5000*** **3 cr. 3 hr.** ▲

Courses having a more narrow focus or those taught on an irregular basis may be offered under the "Topics" heading. New courses may also be taught on an experimental basis under this title.

Plastics Technology

Key to Course Offerings

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▲ Undergraduate Day School

● Undergraduate Evening School

These courses are only offered through Continuing Education.

Statistical Process Control

PLAS 5501 ***3 cr.*** ●

The student learns the use of Statistical Methods and S.P.C. to improve quality and productivity through measurement, control, and reduction of variation in the process. Topics covered include: basic statistics, the normal distribution, control chart theory, process capability studies and gage and measurement analysis. Simple metrology concepts and the basics of geometric dimensioning/tolerancing are also covered.

Injection Molding

PLAS 5502 ***3 cr.*** ●

The reciprocating screw injection molding machine; the components of injection molding machines; the molding cycle; melting and flow theory, including gate seal-off, basic trouble shooting and process effects are examined. The students have hands-on laboratory experience and are responsible for a class presentation.

Industrial Electrical Maintenance

PLAS 5503

This course covers the concepts of electrical trouble-shooting of injection molding machines and associated equipment. Familiarization with basic electricity symbols, blueprint reading, meters used for trouble-shooting, conventional and solid ladder diagrams/ schematics, and trouble-shooting is stressed. Programmable Logic Controls (PLC) are examined.

Mold Design

PLAS 5504 ***3 cr.*** ●

This course examines the interrelation of plastics material processing, product design and function, and mold design and construction. Fundamental principles of cavity design, material feed systems, ejection systems, parting surfaces, mold actions, cavity and core steel selections, 3-plate, insulated runner, and hot runner molds are discussed.

Prerequisite: PLAS 5506.

Principles of Supervision

PLAS 5505 ***3 cr.*** ●

The purpose of this course is to develop an understanding of the role and responsibilities of the supervisor and to strengthen values and skills related to key supervisory functions. The principles and topics addressed include problem solving, decision making, leadership, management ethics, and communication. This course is recommended for experienced and new supervisors and those aspiring to supervisory positions.

Blueprint Reading

PLAS 5506 ***3 cr.*** ●

This course introduces the basic concepts of blueprint reading and discusses types of lines, angles, and views of a drawing. The student also learns about dimensioning circles, arcs, holes, and threads. Emphasis is on understanding how to interpret a blueprint; with time permitting, students learn how to draw a blueprint.

Polymeric Materials, Design, and Application

PLAS 5507 ***3 cr.*** ●

This course provides comprehensive coverage of polymeric materials, plastic design, and test methodology. Material properties, characteristics, and application are presented for injection molded thermoplastic resins. A discussion of polymer blends and compounds using fillers, additives, and reinforcing fibers are included. Property identification and the associated test procedure are reviewed with hands-on testing provided for the major properties. In addition, plastic product design techniques and application are discussed to complement the discussion of materials.

Hydraulics/Pneumatics

PLAS 5508 ***3 cr.*** ●

This course involves a theoretical and practical study of hydraulics and pneumatics, the modern means of power transmission. This course surveys component design and function with an emphasis on problem definitions and solutions. Following an introduction to hydraulics and pneumatics, a study is made of valves, pumps, circuits, and trouble-shooting any hydraulic system.

Political Science

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● Undergraduate Evening School

United States Government

POLS 1000 ***3 cr. 3 hr.*** ▲

In Modern American Government, the major political institutions, such as the Presidency, the Congress, and the Supreme Court, are examined. Their constitutional antecedents and their modern functions are presented. Special attention is given to the current bureaucracy, elections, and the political actors in the election process. I

Introduction to Political Science

POLS 1100 ***3 cr. 3 hr.*** ▲

This course represents an introduction to the field of political science. Political science is the study of how people interact with one another in their communities, whether they are as small as the Fitchburg State College campus, or as large as the entire global community. The course is divided into the following three sections, each of which represents an important sub-field within the discipline: political philosophy, American government, and international politics. I

State and Urban Government

POLS 1500 ***3 cr. 3 hr.*** ▲

The class focuses upon current issues and politics in urban and state government and attempts to evaluate proposed solutions to issues. I

Global Issues

IDIS 1800 ***3 cr. 3 hr.*** ▲ ●

This course examines the interdependency of the world's nations by focusing on current events in the international arena and issues such as ozone depletion, pollution, the global economy, conflict and cooperation, population and hunger. I, IDIS, C

Contemporary International Relations

POLS 2200 ***3 cr. 3 hr.*** ▲

The course studies critical problems confronting the present international system. The "Cold War," armed conflict, internal violence, as well as prospects for the resolution of conflict are explored.

Introduction to the Legal Process

POLS 2270 ***3 cr. 3 hr.*** ▲ ●

The course serves as an introduction to the American legal system. Emphasis is placed on how courts and lawyers function, how cases are decided, and the means by which courts interpret legislation. The class is open to any student, but is recommended for those interested in the legal Internship program.

Political Systems of the Modern World

POLS 2500 ***3 cr. 3 hr.*** ▲

The course provides a comparative analysis of modern national governments, such as Russia, France, Germany, and Great Britain. The importance of the world's political heritage and the implications for the emerging nations of liberal democracy, communism, and dictatorship are explored.

Public Policy Analysis: Case Studies in American Politics

POLS 3000 ***3 cr. 3 hr.*** ▲

The course covers four major divisions of public policy: health, education, labor, and welfare. The aim is to attain an understanding of how the American political system works through a study of the policy that has come out of that system.
Prerequisite: POLS 1000 or POLS 1500.

Civil Rights and Civil Liberties in the United States

****POLS 3600*** ***3 cr. 3 hr.*** ▲

The course presents conceptual perspectives and politics of civil rights and civil liberties. Emphasis is placed on freedom of expression and the problem of loyalty and security, equality, the civil rights movement, and criminal justice procedures.

Independent Study in Political Science

POLS 4900 ***3 cr. 3 hr.*** ▲ ●

The Independent Study is open to students who have the permission of the supervising instructor and the department. The course of study, meetings, and credit are arranged upon approval.

Legal Internship

POLS 4905 ***3 cr. 10 hr.*** ▲

Internships are available in several regional law offices for those persons interested in paralegal work. These internships prepare students for positions in law offices, public administration, and other human services work.

Legal Internship

POLS 4910 ***6 cr. 20 hr.*** ▲ ●

(See description above.)

Legal Internship

POLS 4915 ***9 cr. 30 hr.*** ▲

(See description above.)

Legal Internship

POLS 4920 ***12 cr. 40 hr.*** ▲

(See description above.)

Internships in Political Science

POLS 4940 ***3 cr. 10 hr.*** ▲

Off-campus opportunities, carrying appropriate academic credit, are available in local, state, and federal government offices and with political campaigns. Internships are open to students who have the permission of the department. Credit and hours are arranged by special permission.

Topics in Political Science

POLS 5000 ***3 cr. 3 hr.*** ▲ ●

Courses having a more narrow focus or those taught on an irregular basis may be offered under the "Topics" heading. New courses may also be taught on an experimental basis under this title.

Psychology

Key to Course Offerings

Q: designates courses in the Quantitative Scientific Cluster

I: the Ideas and Events Cluster

B: the Human Behavior Cluster

L: the Literature, Language and Arts Cluster

C: Multicultural

IDIS: Interdisciplinary courses

Multicultural and interdisciplinary courses also fulfill a cluster designation.

* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

General Psychology

PSY 1100 ***3 cr. 3 hr.*** ▲ ●

The course introduces the student to the contemporary discipline of the science of human behavior and mental processes. Topics investigated include the scientific method, biological bases of behavior, maturation, motivation, emotions, learning, personality, and adjustment. The course is prerequisite for all other courses in Psychology. B

Introduction to Research Methods

PSY 2110 ***3 cr. 3 hr.*** ▲ ●

The emphasis in this course is on research design, including consideration of sampling procedures, questionnaire design, methods of observation, and reporting. Q
Prerequisite: PSY 1100.

Psychological Statistics

PSY 2120 ***3 cr. 3 hr.*** ▲

This course expands upon the mathematical concepts introduced in Math 1700. Descriptive statistics are reviewed and inferential statistics are introduced. Analyses considered include t-tests and analysis of variance up to and including factorial designs. Computer analysis is also emphasized. The class meets partial LAS requirement for computer literacy in Psychology major.
Prerequisites: PSY 1100, PSY 2110, and MATH 1700.

The Psychology of Speech and Communication

PSY 2160 ***3 cr. 3 hr.*** ▲

This course provides information for judging speech behaviors of self and others. Topics such as concepts of speech, language and communication, effective speaking and listening behaviors, non-verbal communication, animal communication, linguistic and psycholinguistic theory are covered. The class meets LAS speaking and listening requirement for the Psychology major. B

Prerequisite: PSY 1100.

Human Growth and Development

PSY 2200 ***3 cr. 3 hr.*** ▲ ●

This life-span course emphasizes a study of the physical, physiological, social, and psychological development of the individual from conception to old age. B

Prerequisite: PSY 1100. (Cannot be used as credit toward the major, but may be used for the minor.)

Child Psychology

PSY 2210 ***3 cr. 3 hr.*** ▲ ●

This course offers an introductory overview of the developing child from conception through preadolescence. Theories and research are used to lay the foundation for the study of the physical, cognitive, social, and emotional development of the child. Also considered are such topics as attachment, moral development, language acquisition, and genetic and environmental influences on development. This course meets the Office for Children requirement for Category-A daycare certification. B

Prerequisite: PSY 1100.

Adolescent Psychology

PSY 2230 ***3 cr. 3 hr.*** ▲ ●

Adolescence as a stage of development and as a cultural phenomenon is investigated in this course. The influence of physical, cognitive, and psychosocial factors on the adolescent's search for identity is examined. Emphasis is on an interdisciplinary approach that draws on relevant theories and research from a wide range of fields. B

Prerequisite: PSY 1100.

Adult Development

PSY 2240 ***3 cr. 3 hr.*** ▲

This course introduces the student to theories and research for the periods of young and middle adulthood. Physical, mental, and personality processes are covered, as well as issues and problems of research in adult development. Application of this knowledge to adults in their relationships and in their work settings is stressed. B

Prerequisite: PSY 1100.

Psychology of Women

PSY 2250 ***3 cr. 3 hr.*** ▲

Objectives of this course include an increased awareness of the psychological development of women and of the dimensions of self and personhood in relation to society. The examination and analysis of issues relative to current debate concerning the status of women is explored.

Prerequisite: PSY 1100.

Gerontology: The Psychology of Growing Old

PSY 2260 ***3 cr. 3 hr.*** ▲

This course examines the developmental changes, including both gains and losses, which occur in the later part of the life span. The course focuses on theory and research related to biological, physical, cognitive, and psychosocial changes that occur in late life. The emphasis is on understanding the normal aging process. Research methods and designs used to study aging are also covered. B

Prerequisite: PSY 1100.

Psychology of Human Sexuality

PSY 2280 ***3 cr. 3 hr.*** ▲

This course includes a study of the relationships among the various aspects of sexuality, including relationships, social norms, and cross-cultural variations in sexual behavior. B

Prerequisite: PSY 1100.

Psychology of Personality

PSY 2300 ***3 cr. 3 hr.*** ▲ ●

Dynamic factors in personality formation are studied through some of the leading theoretical positions on personality development.

Prerequisite: PSY 1100.

Psychology of Death and Dying

PSY 2320 ***3 cr. 3 hr.*** ▲

Through lectures, readings, discussions, and media, students explore psychological theory, research, and personal feelings concerning the dying process, suicide, grief, sudden death, and dying as it influences persons at different developmental stages. B

Prerequisite: PSY 1100.

Psychology of Intimacy

PSY 2330 ***3 cr. 3 hr.*** ▲ ●

This course examines the dynamics of partner selection and the process of creating a relationship that maximizes the development of personal integrity and interpersonal security. B

Prerequisite: PSY 1100.

Abnormal Psychology

PSY 2350 ***3 cr. 3 hr.*** ▲ ●

The course reviews normal, neurotic, and psychotic behavior as well as methods of psychotherapy. Techniques for maintaining optimal psychological health are emphasized. B

Prerequisite: PSY 1100.

Interpersonal Effectiveness

PSY 2370 ***3 cr. 3 hr.*** ▲ ●

This is a lab-based course which introduces and develops interpersonal competence, particularly as it pertains to dyadic situations. Basic skill areas such as observation, listening, and questioning are addressed, as are integrative skills, such as conflict resolution and relationship development. Students are asked to become more aware of their own interpersonal behavior, and are introduced to the extensive research literature on interpersonal behavior. Applications in both the personal and the professional domain are addressed. The class meets LAS speaking and listening requirement for the Psychology major. B

Prerequisite: PSY 1100.

Psychology of Captivity

PSY 2400 ***3 cr. 3 hr.*** ▲

This course deals with the effects of captivity on both the captive and the captor. Materials include films, tapes, interviews, first-person accounts, systematic studies of experiences, and the long-term consequences on persons involved as well as on their children.

Prerequisite: PSY 1100.

Psychological Testing

PSY 2450 ***3 cr. 3 hr.*** ▲ ●

This course is designed to give students a broad understanding of the theory and use of psychological testing. Methods of test evaluation, analysis, and interpretation are presented. Standardized testing instruments used to measure human cognitive and affective factors are explored and their purposes reviewed.
Prerequisite: PSY 1100.

Social Psychology

PSY 2500 ***3 cr. 3 hr.*** ▲

This course provides an introduction to the study of human social behavior. Representative topics include attitudes and their formation, aggression, prosocial behavior, conformity, and interpersonal attraction, as well as group dynamics, structure, and leadership. The application of social-psychological research to contemporary social problems is also considered. B
Prerequisite: PSY 1100.

Group Dynamics

PSY 2550 ***3 cr. 3 hr.*** ▲ ●

The nature and dynamics of interpersonal relationships are revealed in typical group settings, such as classrooms, workshop seminars, and other discussion-oriented groups. Emphasis is on both content and process as demonstrated in a laboratory learning environment. The class meets LAS speaking and listening requirement for the Psychology major. B
Prerequisite: PSY 1100.

Small Group Leadership

PSY 2570 ***3 cr. 3 hr.*** ▲

This course is designed to equip students for planning and conducting meetings requiring the coordination of small groups of people. Participants study and practice basic leadership skills applicable to a variety of small group settings. They develop and demonstrate these skills in the context of small group participation in class and as leaders of extra class groups. The class meets LAS speaking and listening requirement for the Psychology major.
Prerequisite: PSY 1100.

Organizational Psychology

PSY 2610 ***3 cr. 3 hr.*** ▲ ●

This course examines organizational influences on motivation and satisfaction of the workforce. Methods of surveying organizational climate are introduced, and a variety of intervention methods are evaluated. Organizational experience in Japan, Western Europe, and the United States are analyzed and compared. B
Prerequisite: PSY 1100.

Work and the Individual

PSY 2620 ***3 cr. 3 hr.*** ▲

This course considers the ways in which individuals meet their needs for growth and development, while the organization meets its needs for worker productivity. How the organization's needs affect workers and how workers react to these pressures are subjects studied. Topics include work as a basic human need, relationships with co-workers, interpersonal skills, uses of power influence, leading and motivating others, meeting personal needs/job satisfaction, adaptation to change, problems in adaptation (alcohol, drugs, interpersonal, lack of competence, etc.), stress management, and career development. B
Prerequisite: PSY 1100.

Human Factors/Ergonomics

PSY 2630 ***3 cr. 3 hr.*** ▲

Students develop the ability to fit the demands of people and work together. Competence is developed in tailoring work conditions and equipment to facilitate human performance and in identifying the skills required by the job.
Prerequisite: PSY 1100.

Performance Appraisal and Development

PSY 2640 ***3 cr. 3 hr.*** ▲ ●

The definition, measurement, and development of performance in complex work roles is analyzed. An essential ingredient of the course is participatory workshops aimed at developing the skills of behavior observation, performance coaching, and training. B
Prerequisite: PSY 1100.

Personnel Psychology

PSY 2650 ***3 cr. 3 hr.*** ▲ ●

This course provides a treatment of the major issues in personnel psychology and emphasizes the psychological aspects of personnel systems. The focus of the course is on the psychological assessment of potential and current employees as a means for "fitting" workers into jobs. Emphasis is also placed on the employment discrimination issues that may emerge in the work setting and the use and interpretation of descriptive and inferential statistics in personnel decision making. B
Prerequisite: PSY 1100.

Learning Theory and Its Applications

PSY 2710 ***3 cr. 3 hr.*** ▲

This course focuses on the principles and theories of learning, as derived by both the laboratory psychologist and the educational researcher. Those theories are applied to various social settings, including the classroom, the family, etc. B
Prerequisite: PSY 1100.

Tests and Measurements

PSY 2750 ***3 cr. 3 hr.*** ▲

This course is a study of the basic statistical concepts and techniques of measurement. Emphasis is placed upon the application of these techniques to teacher-made tests and standardized tests used in education and psychology. B
Prerequisite: PSY 1100. (Cannot be used as credit toward the major but may be used for the minor.)

Principles of Guidance

PSY 2770 ***3 cr. 3 hr.*** ▲

This course introduces students to the psychological theory and research underpinning practice in school guidance counseling.
Prerequisite: PSY 1100.

Advanced Child Psychology

PSY 3220 ***3 cr. 3 hr.*** ▲

This course explores in greater depth principles and theories learned in PSY 2110 and acquaints the student with methodology used in contemporary research in child psychology. Through assigned exercises and individual projects, students focus on selected issues in child development. Students work directly with children in applying the principles and techniques learned in the course. Q

Prerequisites: PSY 2210 or PSY 2230, PSY 2110, MA 1700, a 2.5 cumulative average in Psychology and overall, and permission of Instructor. Strongly recommended: PSY 2120.

Experimental Psychology

PSY 3410 ***4 cr. 4 hr.*** ▲

This course is an analysis and study of the scientific method, experimental designs, and laboratory methods in behavioral science, emphasizing laboratory experiments and scientific communication of results. Students design, analyze, and report their own research. Computer data analysis is also covered. The course meets LAS junior/senior writing requirement as well as LAS requirement for computer literacy for the Psychology major.

Prerequisites: PSY 2110, 2120, and MATH 1700; junior or senior standing in the major, permission of Instructor.

Physiological Psychology

PSY 3420 ***3 cr. 3 hr.*** ▲

This course concentrates on the relationship between the nervous system and behavior. The experiments and theories of several disciplines that have contributed to this understanding are studied, including neuroanatomy, physiology, biochemistry and psychology. The course is designed to introduce and familiarize students with relevant information from each of these fields. Topics include hormones and sexual and aggressive behaviors; brain regulation of sleeping and dreaming; genetic, anatomical, physiological and neurochemical bases of emotions and mental disorders; biological, neural, and biochemical basis of learning and memory. Special emphasis is given to current research results in neuroscience and their implications for clinical application. Q, B, IDIS

Prerequisite: PSY 1100.

Perception

PSY 3430 ***3 cr. 3 hr.*** ▲

In this course principles related to a person's awareness of his or her world are studied. Topics to be considered are psychophysics, the relationship between motivation learning and perception, the sensory bases of perception, and localization in space.

Prerequisite: PSY 1100.

History and Systems of Psychology

PSY 3480 ***3 cr. 3 hr.*** ▲

This advanced course provides a consideration of contemporary psychology as seen in its historical perspective. The development of psychological concepts and theories is traced from their antecedents in philosophy and the physical sciences.

Prerequisites: junior or senior standing, 15 credits in psychology.

Psychology of Learning

PSY 3500 ***3 cr. 3 hr.*** ▲

This course focuses on principles and theories of learning, including classical conditioning, operant conditioning, verbal learning, and acquisition of motor skills.

Prerequisite: PSY 1100.

Motivation

PSY 3530 ***3 cr. 3 hr.*** ▲ ●

Characteristics of motivated behavior, explanation of sources of motives, and application of theories to current research and interpersonal skills are studied in this course. Emphasis is on the biological, learned, and cognitive components of motivation. Topics include internal and external motives, the relationship of stress and motivation, the place of physiological processes in motivation, issues in motivation of others, motivation for aggressive/passive behaviors, and success/failure motivation. B

Prerequisite: PSY 1100.

Cognition

PSY 3550 ***3 cr. 3 hr.*** ▲

Serving as foundations for this course are the neuroscience of cognition and the historical roots upon which our present understanding of human information processing rests. Specific topic areas include attention, semantic and episodic memory, comprehension, categorization, language, problem-solving, and reasoning. Artificial intelligence and the emergence of cognitive science are also considered. Methodology is emphasized throughout the course as students consider classic research studies and apply various techniques in classroom exercises. B

Prerequisite: PSY 1100.

Teaching Practicum

PSY 4800 ***6 cr. 18 hr.*** ▲
PSY 4803 ***3 cr. 9 hr.*** ▲

Students assist an individual faculty member in the teaching of Psychology. Responsibilities vary with the course. The Teaching Practicum is offered by invitation of faculty only.

Prerequisite: 3.0 cumulative average overall and in the major.

Practicum in Psychology

PSY 4810 ***3 cr. 9 hr.*** ▲
PSY 4820 ***6 cr. 18 hr.*** ▲

Students perform basic and applied work in Psychology. Students work with staff in areas of mutual interest.

Prerequisite: a 2.5 cumulative average in psychology and permission of the Instructor.

Independent Study

PSY 4900 ***1-6 cr. 3-18 hr.*** ▲ ●

This experience is offered primarily to Psychology students of junior or senior standing, and requires approval of the professor and of the Psychology Curriculum Committee. The student must petition the Psychology Curriculum Committee the semester prior to undertaking the Independent Study. Independent Study may take the form of special advanced reading programs, problem identification and research, assistantships, or for acquisition of professional skills. Under no circumstances is Independent Study substituted for regularly scheduled courses. Independent Study may be taken for 1 to 6 semester hours.

Prerequisite: 3.0 cumulative average in the major.

Advanced Psychology Seminar

PSY 4920 ***3 cr. 3 hr.*** ▲

In this course students pursue advanced study in their discipline. Students complete a supervised research report and meet in a weekly seminar to discuss their projects and other research topics and issues.

Prerequisite: PSY 2110, 2120, 3410, MATH 1700.

Internship in Psychology

PSY 4950 ***6 cr. 18 hr.*** ▲

Through an Internship the student experiences the relationship between courses in Psychology and their applications in the field. Work is carried on in settings approved by the department, faculty member, and an on-site supervisor. Internships are available in service agencies, business, and industry. Each Internship presupposes specific course background. Students are encouraged to discuss Internship plans with their advisors early in their college experience. Interested students must contact the Psychology Coordinator early in the prior semester of the year in which the Internship is desired. Business and industry Internships are offered only in the spring semester and some direct service Internships are available during the fall semester as well. Liability insurance is required of all students enrolled in this course.

Prerequisites: 2.5 cumulative average overall and in the major; program approval.

Internship in Psychology

PSY 4960 ***12 cr. 36 hr.*** ▲

Please refer to the preceding description and prerequisites for PSY 4950.

Topics in Psychology

PSY 5000 ***3 cr. 3 hr.*** ▲ ●

Courses are offered on an occasional, experimental basis, for supplementation and enrichment of program. More than one such course may be taken with permission.

Russian

Key to Course Offerings

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* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

Russian for Beginners I

****RUSS 1000*** ***3 cr. 3 hr.*** ▲

The correct pronunciation, reading ability, and fundamentals of grammar and syntax are taught in this class. Over the semester Russian gradually becomes the working classroom and laboratory language. L, C

Russian for Beginners II

****RUSS 1100*** ***3 cr. 3 hr.*** ▲

L, C

Intermediate Russian I

****RUSS 2000*** ***3 cr. 3 hr.*** ▲

The course involves remedial pronunciation, grammar review, conversation, and laboratory practice with Russian as the working language. Assigned readings stress USSR life, customs, and culture.

Prerequisite: two years of high school Russian or RUSS 1100 and/or permission of Instructor.

Intermediate Russian II

****RUSS 2100*** ***3 cr. 3 hr.*** ▲

The course is a continuation of RUSS 2000.

Dostoevsky and Tolstoy (in English)

RUSS 2400 ***3 cr. 3 hr.*** ▲

This course provides an in depth comparative study of the two giants of Russian 19th century literature. Contrasts in biography themes and styles are examined. The class is facilitated through lectures and readings in English, a standard length paper, a midterm, and final examination. I, L, C, IDIS

Russian Literature in English Translation

RUSS 2500 ***3 cr. 3 hr.*** ▲

The course is a seminar on a specific topic from Russian literature, such as Soviet Literature or the modern Russian novel. Lectures and readings in English emphasize significant works in Russian and Soviet literature. A midterm and final examination and a standard length paper are required class work. The class may be repeated for credit. I, L, C, IDIS

Russian Culture and Soviet Life (in English)

RUSS 2600 ***3 cr. 3 hr.*** ▲

The course provides an introduction to Russian life and culture as manifested in Russian geography, art, music, film, and literature. National characteristics of the Russian people and their influence on Soviet institutions are explored as well as everyday life in the Soviet Union. The course includes a significant audio-visual component. I, L, C, IDIS

Independent Study in Russian

RUSS 4901 ***1 cr. 1 hr.*** ▲

Independent Study in Russian

RUSS 4903 ***3 cr. 3 hr.*** ▲

The Independent Study is open to students studying the language with the permission of the supervising instructor and the Department Chairman. Meeting times and credit are arranged with approval.

Topics in Russian

RUSS 5000 ***3 cr. 3 hr.*** ▲

Courses having a more narrow focus or those taught on an irregular basis may be offered under the "Topics" heading. New courses may also be taught on an experimental basis under this title.

Science Education

Key to Course Offerings

* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

The following courses are regularly offered in Continuing Education. See the cross-listings for LAS designations.

General Botany

SCED 1000
(see BIOL 1400)

Nutrition

SCED 2000
(see BIOL 1650)

Human Sexuality

SCED 2001
The biological aspects of human sexuality. The purpose of this course is to relate information rather than to advise.

Winter Botany

SCED 3000
An out-of-doors study of the environment during the winter. Daily field trips to study both aquatic and terrestrial plants to discover how they adapt to the cold weather condition.

Common Rocks and Minerals

SCED 3270
(see GEOG 3270)

Introduction to Astronomy

SCED 4000
(see Phys 1030)

Sociology

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▲ Undergraduate Day School

● Undergraduate Evening School

Introduction to Sociology

SOC 1100 ***3 cr. 3 hr.*** ▲ ●

The course encourages the student to analyze critically the social world, which he or she inhabits. Major theoretical orientations and major concepts of the discipline are reviewed. Social institutions such as Family, Education, and Medicine are examined, and different research techniques used by sociologists are introduced. This course is a prerequisite for all other sociology courses. B, C

Cultural Anthropology

SOC 2250 ***3 cr. 3 hr.*** ▲ ●

The course introduces students to varying cultures. Attention is given to hunting and gathering, pastoral, horticultural, agricultural, and industrial societies. Cultural change imposed by industrialization and technological revolution in both third world and modern societies is also analyzed and discussed. The intent of the course is to give students knowledge about the development and variability of cultures, living styles, and values, so that they are prepared to tackle elusive questions of the capabilities, limits, and future of human societies. B, C

Sociology of Aging

SOC 2300 ***3 cr. 3 hr.*** ▲

This course examines the socially defined aged, the aging process, and aging societies. It considers such topics as age roles, the status of the elderly across cultures and across history, and the downward mobility of the elderly in American society. B

Urban Sociology

SOC 2440 ***3 cr. 3 hr.*** ▲

This course provides a survey of the origins and development of cities. Emphasis is placed on the anatomy of modern American cities, world urbanization, urban planning, and social change. The focus is primarily on contemporary American urban life. B

Race and Ethnic Relations

SOC 2500 ***3 cr. 3 hr.*** ▲ ●

This course provides a comparative, historical, and interdisciplinary introduction to interactions between racial and ethnic populations in the U.S. and other societies. Students explore social attitudes and consequences of racial and ethnic difference, and examine how such differences affect the lives of American people. Consideration is given to the political, economic, legal, and socio-cultural experiences of various minority groups. B, I, C, IDIS

Peoples and Cultures of Africa

SOC 2510 ***3 cr. 3 hr.***

A survey of the peoples and cultures of Africa, this course examines the social and cultural systems of groups including the Ibo, Yoruba, Hausa-Fulani, Kpelle, Bantu Tiriki, Ganda, Jie, Rwana, Swazi, and Pastoral Somali.

Drugs and Alcohol

SOC 2520 ***3 cr. 3 hr.*** ▲ ●

In this course, students explore sociological issues revolving around drug and alcohol use and abuse in the American society. Topics of discussion include: the socio-historical origins of drugs and alcohol use from a cross-cultural perspective; effects of formal organizations such as drug rehabilitation and alcoholic centers on drug users; and "Push factors" such as family, work, and economic pressures, as they relate to chemical dependency. Also investigated are society's drug problems in terms of legal and illegal drug use; medical versus recreational use of psychoactive drugs, alcoholic beverages, and tobacco; and definitions and classifications of psychoactive substances. B

Sociology of Religion

SOC 2620 ***3 cr. 3 hr.*** ▲

The course emphasizes the structure and function of religious organizations, beliefs, and practices. Current issues in American religion are also explored. B

Sociology of the Family

SOC 2630 ***3 cr. 3 hr.*** ▲ ●

The course analyzes the structure and function of the family. Current trends along with practical solutions to problems of family living are discussed. B

Sociology of Organizations

****SOC 2650*** ***3 cr. 3 hr.*** ▲

The course introduces the study of work organizations as social systems. The impact of technological change and the effects of structural factors on organizations are considered. Approaches to organization diagnosis and development are discussed.

Social Problems

SOC 2700 ***3 cr. 3 hr.*** ▲ ●

The course examines underlying dynamics and consequences of contemporary social conditions believed to be both undesirable and changeable. Strategies for resolving social problems in the environmental, economic, family, medical, political, and legal spheres are analyzed and compared.

Medical Sociology

SOC 2720 ***3 cr. 3 hr.*** ▲

In this course, students explore the effects of stratification on health status and health care. Topics discussed in class include communication between physicians and patients of different socio-cultural backgrounds; formal organizational studies of health facilities such as hospitals, clinics, or doctors' offices; social factors and their relation to chronic illness; and the sociology of mental illness. Also investigated are the relationships between doctors and nurses, the organization and utilization of health services, the comparative examination of health systems either within a society or in a cross-cultural perspective, and the perception of illness as deviant or aberrant behavior. B

Criminology

SOC 2750 ***3 cr. 3 hr.*** ▲ ●

This course provides a survey of the field of criminology, including such topics as theories of crime; criminal statistics; homicide, rape, property crimes; white collar crimes and corporate deviance; and debates on punishment and rehabilitation. B

Juvenile Delinquency

****SOC 2760*** ***3 cr. 3 hr.*** ▲ ●

This course examines major sociological theories of delinquency including an analysis of empirical studies. Attention is also given to the juvenile judicial system and proposed treatment programs.

Social Stratification

SOC 3000 ***3 cr. 3 hr.*** ▲ ●

The course provides a critical examination of the dominant perspectives and dimensions of social stratification, using a cross-cultural, historical, and inter-disciplinary framework. Trends in social mobility and status attainment in the U.S. and in other nations are compared. B, I, C, IDIS

Basic Skills of Social Research

SOC 3130 ***3 cr. 3 hr.*** ▲

The course emphasizes the aims and techniques of various research methods as applied to sociological study and practice. Topics covered in class include interviewing, observation, questionnaire construction, and quantitative analysis of data. The course meets LAS Computer Literacy for Sociology majors requirement.

Prerequisites: Cultural Anthropology and two additional intermediate level Sociology courses, or permission of Instructor.

Application of Social Research in the Work Setting

****SOC 3140*** ***3 cr. 3 hr.*** ▲

The course provides a deeper understanding of techniques of social research than SOC 2130. The application of such techniques to consumer behavior, business and government organizations, and social agencies, is examined.

Social Theory

SOC 3160 ***3 cr. 3 hr.*** ▲

The course studies social philosophy precursors, sociological scientific theorists from Comte to Parsons, and contemporary schools of thought in Sociology. The course meets LAS Writing requirement for Sociology majors.

Prerequisite: two intermediate level Sociology courses or permission of Instructor.

Law and Society

SOC 3500 ***3 cr. 3 hr.*** ▲

This course focuses on law as a practical resource. Students examine how the availability of law is distributed in society; what the law provides for those who use it; and how the law has been influenced by certain trends of use. Students study ways in which the law has been analyzed, and discover the nature of legal evolution and social change. B

Prerequisites: two intermediate level sociology courses or permission of Instructor.

Women in American Society

SOC 3770 ***3 cr. 3 hr.*** ▲

This seminar course examines the statuses, roles, expectations, and realities of women, particularly as experienced in the contemporary U.S. Patterns and differences among women's lives are explored through a variety of readings, class discussions, and writing projects. (Cross listed in Women's Studies IDIS 2340) B, C, IDIS

Prerequisite: two intermediate level sociology courses, or permission of Instructor.

Independent Study

SOC 4900 ***1-6 cr. 3-18 hr.*** ▲ ●

A program of study designed for in-depth learning in a specific topic for which no regular course is available. This Independent Study is only for Sociology majors and may be taken no more than two times with permission of faculty. Independent Study requires approval of the professor and of the Sociology Curriculum Committee.

Prerequisite: 3.0 cumulative average in the major.

Internship in Sociology

SOC 4960 ***6 cr. 15 hr.*** ▲

The Internship is arranged in consultation with faculty and carried out under the auspices of an approved agency or program at the local, state or federal level. This experience is designed to develop skills in sociological practice, principles, and/or research. Students are encouraged to discuss Internship plans with their advisors early in their college experience, as there are specific procedures and required courses. Liability insurance is required of all students enrolled in this course.

Prerequisite: junior or senior standing, 2.5 cumulative average in the major, program approval.

Internship in Sociology

SOC 4970 ***12 cr. 30 hr.*** ▲

See SOC 4960 for description and prerequisites.

Topics in Sociology

SOC 5000 ▲ ●

Courses are offered on an occasional, experimental basis, for supplementation and enrichment of program. More than one such course may be taken with permission.

Spanish

Key to Course Offerings

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* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

Spanish for Beginners I

SPAN 1000 ***3 cr. 3 hr.*** ▲ ●

The correct pronunciation, reading ability, and fundamentals of grammar and syntax of the Spanish language are studied. Students are taught the four language skills of listening, speaking, reading, and writing. Cultural topics are integrated with these skills. Spanish gradually becomes the working classroom language. Students with a year or more of high school Spanish should register for Spanish 2000. L, C

Spanish for Beginners II

SPAN 1100 ***3 cr. 3 hr.*** ▲ ●

The course is a continuation of SPAN 1000 or is taken with permission of Instructor. L, C

Intermediate Spanish I

SPAN 2000 ***3 cr. 3 hr.*** ▲ ●

The course focuses on a discussion of advanced grammar points and readings dealing with Spanish life. Emphasis is on developing conversational fluency. L, C

Prerequisite: SPAN 1000 or permission of Instructor.

Intermediate Spanish II

SPAN 2100 ***3 cr. 3 hr.*** ▲ ●

The course is a continuation of SPAN 2000 or is taken by permission of Instructor. L, C

Hispanic Culture

SPAN 2600 ***3 cr. 3 hr.*** ▲

This course is designed to provide students with a knowledge and understanding of the Hispanic world through a study of the historical and cultural development of different countries. Emphasis is placed on contemporary problems and social customs of the Hispanic population in the USA. L, C.

Prerequisite: SPAN 2100 or permission of Instructor.

Hispanic Literature

SPAN 2700 ***3 cr. 3 hr.*** ▲

The course focuses on selected works reflecting the Hispanic heritage in contemporary Spanish and Latin American literature. L, C

Prerequisite: SPAN 2100 or permission of Instructor.

Spanish Conversation and Composition

SPAN 3500 ***3 cr. 3 hr.*** ▲ ●

This course is designed to teach skills that increase the student's overall ability to read, speak, and write the language. Students are expected to write compositions on topics developed in class. L, C

Prerequisite: SPAN 2100 or permission of Instructor.

Practical Spanish for the Public Services Professional I

SPAN 4000 ***3 cr. 3 hr.*** ▲ ●

The course teaches practical Spanish to enable people in public services, human services, nursing, medical technology, special education to communicate with their clients. Special emphasis is placed on the cultural and psychological characteristics of Spanish speaking peoples. L, C

Practical Spanish for the Public Services Professional II

SPAN 4100 ***3 cr. 3 hr.*** ▲

The course is a continuation of SPAN 4000 or is taken by permission of Instructor. L, C

Independent Study in Spanish

SPAN 4901 ***1 cr. 1 hr.*** ▲ ●

Independent Study in Spanish

SPAN 4903 ***3 cr. 3 hr.*** ▲ ●

The Independent Study is open to students in the language with the permission of the supervising Instructor and the Department Chairman. Meeting times and credit are arranged upon approval.

Independent Study in Spanish

SPAN 4906 ***6 cr. 6 hr.*** ▲ ●

Topics in Spanish

SPAN 5000 ***3 cr. 3 hr.*** ▲ ●

Courses having a more narrow focus or those taught on an irregular basis may be offered under the "Topics" heading. New courses may also be taught on an experimental basis under this title.

Special Education

Key to Course Offerings

* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

Introduction to Individuals with Special Needs

SPED 2150 ***3 cr. 3 hr.*** ▲

The course focuses on the characteristics, behavioral, social, and learning needs of children and adults with special needs. Emphasis is placed on the total special education delivery system; controversies and issues in the field; relevant state and federal legislation; and court cases.

Program Development for Students with Intensive Special Needs

SPED 2200 ***3 cr. 3 hr.*** ▲

This course examines effective instructional strategies for teaching students with intensive special needs and includes an overview of specific diagnoses and their implications for teaching. Particular attention is given to program development and implementation within inclusive settings. There is a fifteen hour field placement requirement.

Student with Physical and Health Care Needs

SPED 2510 ***3 cr. 3 hr.*** ▲

Students examine various physical and health conditions common in children with special needs. Health care plans are developed along with effective implementation strategies. Collaborative models for working with health care professionals and related services providers will be examined.

Teaching Children with Special Needs I

SPED 2521 ***3 cr. 3 hr.*** ▲

This course addresses the research based approaches to teaching children with special needs. The major focus is the teaching of science and social studies. Included are basic concepts in planning for instruction in all settings with an emphasis on inclusive education. Students learn how to complete curriculum-based assessments, develop behavioral objectives, create lesson plans, design materials, and teach children with diverse learning needs. This course also includes procedures for developing an integrated curriculum unit. A minimum of twenty-five hours in a related field-based experience is required.

Teaching Children with Special Needs II

SPED 2522 ***3 cr. 3 hr.*** ▲

This course builds on previously taught research-based approaches to teaching children with special needs. The major curriculum focus is on language arts. Students further develop skills in assessments, planning and designing materials, and teaching children with diverse learning needs. Students are introduced to procedures for developing IEP's. A minimum of twenty-five hours in a related field-based experience is required.
Prerequisites: SPED 2150, 2521.

Language Development and Speech

SPED 3401 ***3 cr. 3 hr.*** ▲

The course addresses the normal development of speech, language, and hearing and disorders associated with each of these areas of communication. Students demonstrate a knowledge of articulation problems and types of hearing losses as they affect academic learning. In the area of language disorders students demonstrate an understanding of delayed language and language disabilities as they relate to reading, mathematics, and written language. Students analyze second language acquisition and educational practices related to linguistic minority students. Twenty hours of field experience is required.
Prerequisite: SPED 2521.

Behavior Management

SPED 3500 ***3 cr. 3 hr.*** ▲

This course prepares students to carry out a variety of behavior change strategies in educational settings. Emphasis is on the development of a positive, problem-solving approach to supporting the development of constructive learning and social behaviors of children. Students also develop an awareness of the effect of teacher behavior on the behavior of children.
Prerequisite: SPED 2150.

Integrated Professional Program Curriculum

SPED 3655 ***6 cr.*** ▲

This course is taken as part of the twelve credit block of the Integrated Professional Program: Special Educator and Teacher of Students with Intensive Special Needs. The sessions include content in the areas of: Reading/Learning Problems and Math Learning Problems.
Prerequisites: SPED 2150, 2200, 2521, 3401.

Integrated Professional Program, Pre-Practicum: Elementary

SPED 3665 ***3 cr.*** ▲

Students spend 1/2 semester, 1/2 days in an elementary school in classrooms where students with special needs are integrated or included. The college student assists in the design and instruction of lessons, adapting when necessary.
Prerequisites: SPED 2150, 2200, 2521, 3401, 3500.

Integrated Professional Program, Pre-Practicum: Special Educator (PreK-9)

SPED 3675 ***3 cr.*** ▲

Students spend 1/2 semester, 1/2 days in the role of a special educator servicing children with special needs (PreK-9). These children may be serviced in resource rooms, in integrated programs, or in inclusive classrooms. In this role, students are responsible for assisting in assessing children's performance, direct teaching, and evaluation.
Prerequisites: SPED 2150, 2521, 3401.

Integrated Professional Program, Pre-Practicum: Special Educator (5-12)

SPED 3676 ***3 cr.*** ▲

Students assist in the role of the special educator in middle or secondary schools. Students work with individuals who have special needs and who may be serviced in resource rooms, learning centers, or regular classrooms. In this role, students are responsible for assisting in assessing performance, providing direct instruction, and evaluating learning outcomes. Students collaborate with the regular classroom teachers about student performance, expectations, and curriculum modifications.
Prerequisites: SPED 2150, 2521, 3401, 3500.

Integrated Professional Program, Pre-Practicum: Intensive

SPED 3765 ***3 cr.*** ▲

Students assume the role of a teacher of students with intensive special needs. Students work with individuals on functional academics and on the development of appropriate social skills. Participants assist in the development and implementation of instructional programs in the curriculum areas of language, motor, social/recreational and self-care.
Prerequisites: SPED 2150, 2200, 2521, 3401, 3500.

Secondary Programs for Adolescents (14-22) with Special Needs

****SPED 3800*** ***3 cr. 3 hr.*** ▲

Students in secondary education certification programs are provided with the legal perspective of services to individuals with special needs. Learning problems and needs of various disabilities are addressed. Strategies for modifying instruction is a major focus.

Practicum: Intensive Special Educator

SPED 3840 ***4 cr.***

Students assume the role of the teacher of students with intensive special needs, guided by the cooperating teacher and college supervisor. Full day classes are offered one day a week on program development for students with special needs and behavioral/social issues in the classroom.

Practicum: Elementary Educator

SPED 3860 ***4 cr.***

Students assume the role of the teacher of the elementary teacher 4 full days a week for the semester, guided by the cooperating teacher and college supervisor. Full day classes are offered one day a week on assessment and behavioral/social issues in the classroom.

Practicum: Special Educator

SPED 3870 ***4 cr.***

Students assume the role of the special educator 4 full days a week for the semester, guided by the cooperating teacher and college supervisor. Full day classes are offered one day a week on assessment and behavioral/social issues in the classroom.

Assessment for Children and Youth with Special Needs

SPED 4001 ***3 cr. 3 hr.*** ▲

The course introduces students to the assessment process, describes a comprehensive evaluation, and discusses mandatory assessment regulations. The topics of description, statistics, reliability and validity, and norm/criterion referenced assessment are addressed. Various types of assessment are reviewed and discussed. The focus is on interpreting test results and using test data to write educational objectives.

Independent Study

SPED 4900 ***3 cr. 3 hr.*** ▲

The Independent Study facilitates the review, development, and synthesis of a problem in special education. The Independent Study is open to juniors and seniors with permission of the Instructor.

Topics in Special Education

SPED 5000 ***3 cr. 3 hr.*** ▲

Provides students with an opportunity to identify, review the literature, and discuss some of the critical issues affecting the field of special education. The topic is selected by the Instructor.

Speech

Key to Course Offerings

Q: designates courses in the Quantitative Scientific Cluster

I: the Ideas and Events Cluster

B: the Human Behavior Cluster

L: the Literature, Language and Arts Cluster

C: Multicultural

IDIS: Interdisciplinary courses

Multicultural and interdisciplinary courses also fulfill a cluster designation.

* Asterisk indicates that the course may be offered less than once every two years.

▲ Undergraduate Day School

● Undergraduate Evening School

Speech Improvement

****SPCH 0100*** ***1 cr. 1 hr.*** ▲

Students are assigned to this remedial course after being evaluated as needing speech improvement. Individual and group therapy is used.

Introduction to Speech Communication

SPCH 1000 ***3 cr. 3 hr.*** ▲ ●

The class focuses on theory and practice of interpersonal and public communication, including communication theory, self-concept, perception, language, listening, non-verbal communication, and public speaking. L

Argumentation and Debate

SPCH 1100 ***3 cr. 3 hr.*** ▲

Students participate in projects that emphasize analysis, research, evidence, strategies, briefing, refutation, and the delivery of debates on representative questions. L

Business and Career Communication

****SPCH 1200*** ***3 cr. 3 hr.*** ▲

Theory and methods of communication are applied to business and career problems. Emphasis is placed on skills especially important to students planning to work for or with an organization. Interviewing, group conferences, and staff presentations are emphasized.

Effective Speaking for the Electronic Media

SPCH 1300 ***3 cr. 3 hr.*** ▲

The class focuses on a variety of speaking experiences encountered by those who plan to use electronic media in their occupation. The class is particularly suited to students who anticipate speaking roles in industry-made productions as well as those who aspire to careers as professional broadcasters. L

Discussion and Conference Techniques

****SPCH 1400*** ***3 cr. 3 hr.*** ▲ ●

The course explores the fundamentals of group discussion in private and public settings. Emphasis is on group structure, leadership, and interpersonal relationships, including extensive practice in varied group situations.

Public Speaking

SPCH 1600 ***3 cr. 3 hr.*** ▲

The course fosters the development of skills and strategies employed in the preparation and presentation of the public address. Students make critical assessments of rhetorical strategies used by public figures. L

Intercollegiate Debate and Forensics

****SPCH 2100*** ***1 cr. 1 hr.*** ▲

The course provides opportunities for study and participation in debate and forensic speaking activities.

Voice and Articulation

****SPCH 2400*** ***3 cr. 3 hr.*** ▲

The course concentrates on the elements of vocal production and presentation with special emphasis on the study and application of phonetic theory. L

Persuasion

SPCH 2600 ***3 cr. 3 hr.*** ▲

The course studies the causes of listener belief and action with special emphasis on the development of strategies to influence listener behavior.

Rhetorical Criticism

****SPCH 2800*** ***3 cr. 3 hr.*** ▲

The class explores approaches to the rhetorical criticism of significant speeches and speech movements, past and present.

Technical Theater

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● Undergraduate Evening School

Theatrical Design Skills

TETA 2100 ***3 cr. 4 hr.***

A lecture/laboratory course presenting basic problem solving skills in scenic and costume craft covering terminology and processes of stage production including integration of design elements/ materials, basic drafting, stage carpentry, rigging, equipment use, and shop safety.
Prerequisites: ITEC 1200, 1300, 1400.

Fundamentals of Stage Lighting Design

TETA 2300 ***3 cr. 4 hr.***

A lecture/laboratory course dealing with the application of the elements of design relating to lighting for the theater and dance. Mechanics of basic electricity, color theory, instrumentation , distribution, and control.
Prerequisite: ITEC 1000.

Scene Design

TETA 2400 ***3 cr. 4 hr.***

A lecture/laboratory study of the historical and contemporary contribution of space and environment atmospherics to the creation of the world of the play/dance and the theater experience as a whole. Rendering, graphic media, specification writing, and scenic models are addressed.
Prerequisites: TETA 2100, ITEC 1000.

Costume Design

TETA 2500 ***3 cr. 4 hr.***

The history of fashion silhouette is explored along with the design elements used in developing a character's costume. Students will apply historical perspective and utilize the design elements of line, texture, color, and gesture in designing costumes.
Prerequisites: TETA 2100.

Advanced Stage Lighting Design

TETA 3300 ***3 cr. 4 hr.***

A lecture/laboratory study of the problems of stage lighting for the Proscenium and Non-Proscenium stages. Students are expected to develop and apply concept and historical lighting techniques in various theater and dance genre (musical-comedy, cabaret, modern, and jazz dance). Computer applied lighting will be used in a production environment.
Prerequisites: TETA 2300, ITEC 2410.

Advanced Scene Design

TETA 3400 ***3 cr. 4 hr.***

An advanced course emphasizing approaches and techniques relating to the design, development, and implementation of scenic concepts. Students will utilize approaches to research design and develop scenic concepts. Concepts will be developed, rendered, constructed, and rigged to production standards.
Prerequisites: TETA 2400, ITEC 2410.

Advanced Costume Design

TETA 3500 ***3 cr. 4 hr.***

An advanced lecture/laboratory study of the integration of design elements into unified production styles. Students will study historical clothing. Construction techniques and rendering will be applied using CAD. Line, texture, color, gesture and movement will be integrated into a unified production style and applied in a production environment.
Prerequisites: TETA 2500, ITEC 2410.

Stage Make-up

TETA 3600 ***3 cr. 4 hr.***

A lecture/laboratory course investigating the principles, techniques, and materials of character stage make-up and practical application. Students will apply, in a production setting, principles, techniques, and materials of character stage make-up. They will identify historical justification for period make-up and apply techniques for live animation, clowning, and dramatic character.
Prerequisites: TETA 2400.

Stage Management

TETA 4100 ***3 cr. 4 hr.***

A lecture/laboratory study of the professional union approach to stage management and personnel mediation in stage production. Students will apply knowledge and technique related to contract and union policy in various repertory scenarios. The aspects of prompt books, blocking documentation, call-sheets, rehearsal set-up and running and calling the show will be implemented.
Prerequisites: senior status.

Theater

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Introduction to Theater

THEA 2000 **3 cr. 3 hr.** ▲ ●

This introductory course surveys theater with emphasis on its history, focuses, practices, and major practitioners, including directors, actors, and scenic designers. The focus is on historical and social contexts. L, C

Children's Theater

****THEA 2100*** **3 cr. 3 hr.** ▲

This introductory course in theater for children explores its principles and practices, covering aspects of play production for juvenile audiences. Emphasis is on script selection and evaluation, directing, acting, and staging techniques.

Mime and Movement

****THEA 2500*** **3 cr. 3 hr.** ▲

This workshop-oriented course utilizes the basic techniques of theatrical mime and movement with emphasis on developing each student's potential for effective physicalization on stage.

Acting

THEA 2700 **3 cr. 3 hr.** ▲ ●

In this course the acting fundamentals of stage speech and movement, creative mime and improvisation are explored. Plays are read and analyzed. Systematic technique building and scene study are heavily emphasized. L

Stagecraft and Theater Production

****THEA 3000*** **3 cr. 3 hr.** ▲

In a laboratory situation, the student takes one selected play from initial sketches through to the finished model and plans for production, including design, set building, costuming, lighting, and management.

Directing the Play

THEA 4000 **3 cr. 3 hr.** ▲

This lecture/seminar/workshop covers the basic elements of style, blocking, organization, and focus for directing.

Independent Study

THEA 4903 **3 cr. 3 hr.** ▲ ●

The Independent Study is for exceptional students excelling in scholarship and is taken upon approval of department head and advising instructor. Course of study, meetings, and credit are arranged upon approval.

Internship

THEA 4940 **3 cr.** ▲

Topics

THEA 5000 **3 cr. 3 hr.** ▲

Courses having a narrow focus or those taught on an irregular basis may be offered under the "Topics" heading. New courses may also be taught on an experimental basis under the title.

Women's Studies

Key to Course Offerings

Q: designates courses in the Quantitative Scientific Cluster
I: the Ideas and Events Cluster
B: the Human Behavior Cluster
L: the Literature, Language and Arts Cluster
C: Multicultural
IDIS: Interdisciplinary courses
Multicultural and interdisciplinary courses also fulfill a cluster designation.
* Asterisk indicates that the course may be offered less than once every two years.
▲ Undergraduate Day School
● Undergraduate Evening School

Introduction to Women's Studies

IDIS 1000 **3 cr. 3 hr.** ▲ ●

The course presents a cross-cultural, historical, and interdisciplinary introduction to topics and themes in women's experiences, including roles in the family, the work force, and public life. L, I, C, IDIS

Women and Literature

3 cr. 3 hr. ▲

(See ENGL 2900) L

Women in Latin America

IDIS 1100 **3 cr. 3 hr.** ▲

The course provides a multicultural and interdisciplinary examination of the social, political, and economic situation of contemporary Latin American women using autobiographies, literature, and films.

Women in American Society

IDIS 2340 **3 cr. 3 hr.** ▲ ●

The course focuses on the multicultural and interdisciplinary examination of the statuses, roles, expectations, and realities of women in society with emphasis on the U.S. B, C, IDIS

Contemporary Issues in Women's Health

IDIS 2340 **3 cr. 3 hr.** ▲ ●

The course provides a multicultural and interdisciplinary examination of women's health issues, including violence against women, sexual freedom, abortion, menopause, work place risks, and problems of poor, elderly women. I, B, C, IDIS

History of U.S. Women to 1870

3 cr. 3 hr. ▲

(see HIST 2450) I, C

History of U.S Women from 1870 to the Present

3 cr. 3 hr. ▲

(see HIST 2500) I, C

History of Women in Europe

3 cr. 3 hr. ▲

(see HIST 3450) I

Psychology of Women

3 cr. 3 hr. ▲

(see PSY 2250)

Independent Study in Women's Studies

IDIS 4903 *3 cr. 3 hr.*

Women, Art, and Society

3 hr. 3 cr. ▲ ●

(see ART 1830) L, C

Women, Music, and Society

3 hr. 3 cr. ▲ ●

(see MUSC 3900) L

Topics in Women's Studies

IDIS 5000 *3 cr. 3 hr.* ▲ ●

This course serves as a vehicle for curriculum experimentation and enrichment. Topics are selected by the instructor, usually from work in progress.

Internship

IDIS *3 cr.* ▲

Worcester School for Professional Crafts

Clay Formulation

WSPC 1010 *3 cr. 6 hr* ▲

Students examine the concepts in formulating clay bodies for specific use with emphasis on shrinkage, density, porosity, and thermal expansion/ contraction. Students explore the complex relationship of various clays and chemicals.

Handbuilding in Clay

WSPC 1020 *3 cr. 6 hr.* ▲

This class provides an introduction to clay materials and basic forming techniques, including pinch, coil, and slab processes. Students fire their own works to better understand the changes that pit firing and raku firing can cause.

Design for Clay

WSPC 1030 *3 cr. 6 hr.* ▲

Designs found in contemporary and historical clay objects are examined, and students introduce these concepts into their work. Emphasis is given to the relationship between form and surface decoration.

Wheel Throwing

WSPC 2010 *3 cr. 6 hr.* ▲

The basics of wheel throwing and the development of more complex thrown clay forms are practiced. Students, using stoneware clay, begin with cylindrical forms, then proceed to spherical, and more complex forms (handles, lids, pitchers, and teapots).

Glaze Formulation I

WSPC 2020 *3 cr. 6 hr.* ▲

Glaze materials used by the potter, including their sources and uses are studied. Students formulate, mix, and test base glazes; line blends, (color testing); and correct glaze defects. Health hazards and safety precautions are discussed and observed when using raw materials.

Electric Kilns: Firing and Maintenance

WSPC 2030 *3 cr. 6 hr.* ▲

Students examine methods of electric kiln building, firing, and maintenance. Firing schedules are employed as students gain experience in loading the studio kilns on a regular basis.

Production Techniques in Clay

WSPC 3010 *3 cr. 6 hr.* ▲

Students focus on methods for producing multiples of a particular design. Students learn the drape mold technique and use of an extruder for efficiency. The interaction of function and design is stressed.

Glaze Formulation II

WSPC 3020 *3 cr. 6 hr.* ▲

Students explore glaze possibilities while developing a personal aesthetic. Special glaze effect and colorants are stressed. Students may pursue specific firing methods and temperatures ranges of their choice.

Design for Production Methods

WSPC 3030 *3 cr. 6 hr.* ▲

Students learn how to design a project with a specific technique in mind. Issues of time, materials, practicality, marketing, and their effects on the design process are explored.

Advanced Clay

WSPC 4010 *3 cr. 6 hr.* ▲

In this course students choose to study specific areas they find appealing and challenging. Students submit written goals and objectives for approval by the Instructor. Possible techniques for study include high fire reduction, oxidation firing (any temperature), or raku firing.

Independent Directions in Design

WSPC 4020 *3 cr. 6 hr.* ▲

In this course students have a greater opportunity to work on personal expression and creativity. Work may be sculptural or functional. Students sketch out ideas for clay and evaluate works in progress with the instructor and other students.

Kiln Design and Construction

WSPC 4030 *3 cr. 6 hr.* ▲

In this course methods of kiln building, fuels, and firing options are presented. Topics, such as burners, insulation, kiln proportions, and BTU input figures, are discussed. Students build or repair kilns as opportunities arise.

Weaving I
WSPC 1110 ***3 cr. 6 hr.*** ▲
The course serves as an introduction, through demonstrations and lectures on weaving materials, looms, and tools, that provides students with basic weaving elements. Course work includes calculating threads, warping, dressing the loom, weaving, and finishing methods.

Surface Design I
WSPC 1120 ***3 cr. 6 hr.*** ▲
Students explore surface design techniques such as direct painting and screen printing. Students develop their expressive skills while learning about color and pattern.

Fundamentals of Dye Technology
WSPC 1130 ***3 cr. 6 hr.*** ▲
Students investigate dyestuffs and chemicals, textile materials, and color methods. Through the demonstration of synthetic dye methods, students learn basic dye technology and develop their ability to choose and control color to achieve freedom and accuracy in their textile designs. Projects incorporate acid dye, reactive dye, and direct dye.

Weaving II
WSPC 2110 ***3 cr. 6 hr.*** ▲
Technical and conceptual skills are expanded while examining the history and expressive potentials of weaving. Emphasis is placed on tapestry techniques and drafting. Ancient and contemporary weaving methods are studied through slide lectures and visits to museums and galleries.

Textile Design
WSPC 2120 ***3 cr. 6 hr.*** ▲
Students establish a foundation for their design sense through textile design theory, including color, pattern, rhythm, and repetition. Through demonstrations, students learn to use design materials, develop their own imagery, and transfer them to paper.

Surface Design II
WSPC 2130 ***3 cr. 6 hr.*** ▲
Surface design techniques are explored through a series of projects that teach students the basic construction of fabrics and the ways fabric can be manipulated.

Hand Constructed Textiles
WSPC 3110 ***3 cr. 6 hr.*** ▲
Students explore new and innovative ways to use fabric and combinations of fibers and other materials. Through demonstrations in feltmaking and papermaking, students learn to develop their own designs and images, both in flat and sculptural objects.

Advanced Techniques
WSPC 3120 ***3 cr. 6 hr.*** ▲
Students explore their chosen subject through reading and studying museum items, and they develop proficiency through sample making and completion of a final project. Double cloth pick-up and warp painting, printing and ikat are explored through a series of samples. The final choice is a semester study (final piece) developed by the student. Students pursue their personal interest with the help of the instructor.

Clothing Design Project I
WSPC 3130 ***3 cr. 6 hr.*** ▲
For their projects, students choose from either production items or one-of-a-kind clothing. As a final stage of fabric printing instruction, students integrate their skills with materials, color, pattern design, and clothing structure design.

Conceptual Approach to Fiber Art
WSPC 4110 ***3 cr. 6 hr.*** ▲
This course is about the aesthetic aspects of fabric. Students are introduced to design elements such as scale, personal iconography, and language.

Interior Objects Design Project
WSPC 4120 ***3 cr. 6 hr.*** ▲
The subject for a major large scale work, either a production item, such as drapery or upholstery, or a one-of-a-kind item dealing with the window, floor, or furniture, is chosen. As the final stage of fabric design, students have the opportunity to blend acquired design skills with their own creativity to produce and present professional work.

Clothing Design Project II
WSPC 4130 ***3 cr. 6 hr.*** ▲
Students progress to the woven structure of fabric and how it relates to clothing. For their projects, they choose either a production item or one-of-a-kind clothing.

Design for Metals
WSPC 1210 ***3 cr. 6 hr.*** ▲
Introductory design theory is applied to the creation of jewelry and metalwork. Drawing, rendering, and modelmaking are an integral part of this course.

Surface Enrichment
WSPC 1220 ***3 cr. 6 hr.*** ▲
Students learn textural and pictorial methods of embellishing metal surfaces in a survey of ancient and contemporary techniques.

Fabrication I
WSPC 1230 ***3 cr. 6 hr.*** ▲
The basic techniques of metalsmithing are considered. Through demonstration and student experimentation, each student learns the ways metal is shaped, joined, and finished.

Introduction to Casting
WSPC 2210 ***3 cr. 6 hr.*** ▲
Students are introduced to the casting process. Instruction includes direct carving, sandcasting, lost-wax casting, and the making of multiples through molds.

Stone Setting
WSPC 2220 ***3 cr. 6 hr.*** ▲
Through demonstration, illustrations, slide and video presentation as well as the production of samples students develop stone-setting skills.

Fabrication II
WSPC 2230 ***3 cr. 6 hr.*** ▲
The techniques learned in Fabrication I and Surface Enrichment are further developed. Students explore more complex techniques and develop their technical skills.

Design for Casting
WSPC 3210 ***3 cr. 6 hr.*** ▲
This advanced course stresses the design of forms appropriate to the casting process. Exploring the shapes and surfaces of cast objects helps students extend their design ideas.

Toolmaking and Blacksmithing
WSPC 3220 ***3 cr. 6 hr.*** ▲
Students examine the technology of steel and its basic working methods. Each students learns to forge, heat treat, and finish steel while creating tools and objects of their own design.

Mechanisms for Jewelers

WSPC 3230 ***3 cr. 6 hr.*** ▲

Students learn to construct catches, clasps, bails, closures, and pin backs that are integrated into the total design and function of their pieces.

Personal Directions in Design

WSPC 4210 ***3 cr. 6 hr.*** ▲

This senior level course provides an opportunity for each student to pursue personal design directions. Demonstrations and class instruction are geared to the student's needs.

Advanced Techniques

WSPC 4220 ***3 cr. 6 hr.*** ▲

Students, under the instructor's guidance, explore advanced techniques in an atmosphere open to personal choice and serious study.

Production Methods

WSPC 4230 ***3 cr. 6 hr.*** ▲

This course focuses on the production by each student of a line of jewelry items or metal objects. Students concentrate on designs and methods best suited to a production line or limited edition.

Design in Wood

WSPC 1310 ***3 cr. 6 hr.*** ▲

Students are introduced to processes for designing in wood, starting with small objects and working up to furniture. Drawing and modelmaking are used to develop ideas. Slides, talks, and discussions follow the assignments.

Characteristics of Wood Carving

WSPC 1320 ***3 cr. 6 hr.*** ▲

Students explore the characteristics of various woods and use of hand carving tools to complete moderate size projects. Students discuss the properties of wood as they apply to creating wooden forms.

Hand Tool Joinery Techniques

WSPC 1330 ***3 cr. 6 hr.*** ▲

Basic skills with hand tools and various wood construction techniques are developed through demonstrations and experimentation.

Furniture Design

WSPC 2310 ***3 cr. 6 hr.*** ▲

Students design a series of small pieces of furniture. Course work includes individual research into historical furniture periods, slide presentations, and project critiques.

Construction Techniques

WSPC 2320 ***3 cr. 6 hr.*** ▲

Through demonstrations, students learn the techniques of machine cut joinery. Special projects are assigned employing different joinery methods.

Care and Use of Machinery

WSPC 2330 ***3 cr. 6 hr.*** ▲

The safe use and maintenance of woodworking power machinery is taught. Proper operation and safety procedures are demonstrated and discussed.

Mechanical Drawing for Furniture

WSPC 3310 ***3 cr. 6 hr.*** ▲

Mechanical drawing techniques that apply to the furniture industry are presented. Students develop drawings of actual projects to be built during this semester and the fourth semester.

Human Factors in Furniture Design

WSPC 3310 ***3 cr. 6 hr.*** ▲

The relationship between the human form and furniture is explored. Research in ergonomics culminates in the design and production of a chair.

Advanced Construction Techniques

WSPC 3330 ***3 cr. 6 hr.*** ▲

Students continue to explore furniture construction, using advanced techniques and completing complex, specialized projects.

Personal Directions in Design

WSPC 4310 ***3 cr. 6 hr.*** ▲

Woodworkers pursue individual directions through a series of advanced projects. Critiques are conducted continuously throughout each student's project.

Woodworking Business

WSPC 4320 ***3 cr. 6 hr.*** ▲

Students discuss aspects of setting up a wood business as well as what to make, how to make it, and how to market it.

Drawing for Crafts

WSPC 1410 ***3 cr. 6 hr.*** ▲

Students examine the various aspects of drawing skills used to convey the illusion of three-dimensional design. Class work emphasizes the importance of proficiency for the craft designer and working craftsperson. Through technical exercises, each student learns to draw objects with confidence.

Design for Crafts

WSPC 2410 ***3 cr. 6 hr.*** ▲

Through various lectures and projects, students discover the integral relationship of design elements to their own studio work. Among the elements explored are line, color, form, rhythm, texture, scale, and the use of positive and negative space. Creative thinking, understanding visual perception, and class discussions are encouraged. Students examine their sources of inspiration and influences as they gain an understanding of their own work.

Slide Photography and Business Practice

WSPC 3410 ***3 cr. 6 hr.*** ▲

This course consists of two separate components. In the first, students develop skills in producing color slides of their artwork critical for portfolios and for exhibition purposes. In the second component, students receive practical advice on starting and managing a craft business. Topics covered include pricing, advertising, and marketing.

Craft History Seminar

WSPC 4410 ***3 cr. 6 hr.*** ▲

Students survey the history of fine and decorative arts to better understand the role of today's crafts. Past styles, movements, and patterns in technical developments are the basis for discussions about the concerns faced by today's craftspeople.

Graduate Division

The Graduate School provides the opportunity for scholarly achievement beyond the baccalaureate level. The objective of graduate education at Fitchburg State College is to offer quality and diverse programs in both professional and academic areas so that students can demonstrate integrated knowledge in a chosen discipline. The college is committed to creating a challenging and rewarding experience, designed to promote the development of specialized studies, professional academic research, and scholarship.

Graduate Faculty

Fitchburg State College faculty holding terminal degrees are eligible for graduate faculty status. Faculty with advanced degrees and special recognition in their field are qualified for membership in the Associate Graduate Faculty. Experts from other universities or the community-at-large serve, by invitation, as Visiting Lecturers.

Administration

The Graduate Division is administered by the Graduate Dean.

The Graduate Council consists of five members of the graduate faculty (selected by the Fitchburg State College Faculty Association), three administrators (appointed by the College President), and a matriculated graduate student (elected by the committee). Specific responsibilities of the Council include:

- Advising the Dean
- Changing course requirements within the existing graduate curricula initiated by departmental graduate curriculum committees
- Adding new courses and deleting existing courses within such curricula
- Hearing appeals from graduate students related to the college's Graduate Program

Reports and recommendations made by the Graduate Council are transmitted to the President of the college through the Academic Vice President; copies are transmitted to the chairperson of each academic department.

Admissions

Admission Requirements for Graduate Study

To apply for study in the Graduate Program applicants are required to submit:

- An application for admission (available from the Admissions Office or the Graduate Office)
- An official transcript of a Bachelor's degree from an accredited College or University: All transcripts must be sent directly from the institution to the Graduate Admissions Office. No hand-carried transcripts will be accepted. Transcripts must verify that a baccalaureate program, including comprehensive examinations, was completed.
- An official report of the Miller Analogies Test Score, or the Graduate Record Examination (GRE), or GMAT score for Master of Business Administration Degree candidates. Test scores over five years old will not be accepted.
- Three letters of recommendation from individuals under whom the applicant has studied and/or under whose immediate supervision he/she has worked in a professional capacity; and/or from others who are in a position to offer a pertinent appraisal of academic and interpersonal skills, ability, and potential. Applicants are asked to use the Letter of Recommendation forms provided with the Graduate Application. All letters of recommendation should be mailed directly to the Graduate Admissions Office by the individual making the referral. Hand-carried letters will not be accepted.
- $10 application fee
- Professional resume
- Additional program-specific degree requirements are listed with program descriptions

The application, fee, and other requested materials should be sent to:

The Admissions Office
Fitchburg State College
160 Pearl Street
Fitchburg, MA 01420-2697

Application Procedures—International Students

Applicants who do not possess a permanent visa with an Alien Registration number must submit the following paperwork in order to be considered for admission to Fitchburg State College:

1. Applicants must take the Test of English as a Foreign Language (TOEFL) if their native language is not English. A Student must receive a minimum score of 500. To request an application write to: TOEFL, Box 899, Princeton, NJ, 08540 U.S.A. The college may also request additional information regarding the applicants ability to converse in English.

2. An official bank statement must be provided from a bank showing that sufficient funds will be available for one academic year. The total expense for graduate study for fall and spring semester is $9630.00 (this includes tuition and fees, living expenses and miscellaneous expenses).
   - The bank statement must show the amount available in U.S. dollars.
   - The statement must show when the account was opened.
   - The statement must show the bank's official seal and must be notarized and sent directly to Graduate Admissions.

3. Also, if the student will have a financial sponsor, the college must receive a notarized letter of support stating the sponsor will be financially responsible for the student while attending Fitchburg State College. This letter must be mailed directly to the Graduate Admissions Office. Please note that no federal or state financial aid is available to students with F or J visas.

4. If the applicant is already in the United States, he/she must submit copies of the following:
   - I-94 card
   - Passport
   - Visa Stamp
   - Copies of all past I-20/ or IAP-66

5. If the student is transferring from another university or college in the United States, a Transfer Recommendation Form must be completed. You may also request this form from the International Education Office.

Application Deadlines

Spring Admission: Dec 1st
Summer Admission: May 1st
Fall Admission: July 1st

Admission Process

Once all application materials have been received by the Admissions Office, they are forwarded to the Departmental Graduate Committee offering the specialization to which the application was made. The Graduate Committee reviews a candidate's qualifications and makes a recommendation to the Graduate Dean. The admission process is completed once the Graduate Dean concurs with the departmental recommendation and approves graduate admission. While the admission decisions are based on minimum requirements, they are individually subjected to the process outlined below.

Admissions Standards and Criteria

Students who meet the following criteria are eligible for consideration for admission:

- A 2.8 average or better on a 4.0 scale from an accredited four year institution
- A score greater than 50th percentile on either the Miller's Analogies Test (MAT) or the Graduate Record Examination (GRE)

Some programs have additional requirements. Please refer to the relevant program descriptions.

Applicants who meet just one of the two admissions criteria but exceed in the other and who have additional evidence of academic promise are considered upon recommendation from the appropriate Program Chair. Students lacking undergraduate prerequisites but meeting all other admissions requirements may be admitted to the program without fully matriculating.

Transfer of Credit

The Graduate Office accepts a maximum of 6 semester hours in transfer credits from regionally accredited graduate schools. An additional 6 semester hours of Fitchburg State College graduate credits may be transferred into a graduate program. Transfer credit requests are acted upon when a student is accepted as fully matriculated.

The transfer of credits must be approved by the student's Academic Advisor and by the Graduate Dean (approval forms are available in the Graduate Office) and meet the following criteria:

- A grade of B (3.0)
- Courses accepted in transfer must carry Graduate Level Credit
- Courses must be relevant to degree specialization
- Transferred courses are only valid if taken within six years of the date of graduation from a Master's degree Program
- Transferred courses are not included in cumulative GPA
- No requests for transfer credits are accepted during the Spring Semester prior to a student's anticipated graduation
- Courses previously counted toward a Master's degree from FSC or another accredited institution do not qualify for transfer towards an FSC Master's or CAGS Program

Residency Requirement

Students acquiring credit towards a Master's degree off-campus in affiliated programs must take at least 6 credits of core course requirements with a full-time FSC faculty member either on campus or at an off-campus site.

Academic Policies and Procedures

Advisors and Plan of Study

Graduate Advisors

Every student is assigned an advisor from the student's area of specialization. The advisor:

- Provides a vital link between the students, faculty, and the Dean
- Assists the degree candidate in developing a plan of study
- Approves all courses, including electives, accepted in the student's degree programs

All variances from the approved plan of study must be filed with the Registrar's Office. Forms for the plan of study are available in the Graduate Office or Registrar's Office.

Course Registration

Students must register for courses within the curriculum requirements as set in the College Catalog of the year of matriculation. However, it is the right of the College to alter the requirements to meet statutory, educational, or professional standards.

For regularly scheduled courses, students must register before the second class meeting. Early registration is recommended for all matriculated graduate students and graduate applicants in order to secure seats in the courses needed to proceed in degree programs. The regular registration period ends two weeks prior to the start of the semester, with "late registration" and late charges commencing thereafter. Please refer to the semester course bulletin for specific dates.

Advance Registration

Advance registration privileges are reserved for graduate students enrolled in CAGS and Master's degree programs at Fitchburg State College. Graduate degree students must make appointments with their advisors for Advance Registration during the time specified for that purpose through the Graduate Office.

Special Students

A special student may take classes in most graduate or certificate programs but is not matriculated as a degree candidate in either program. Policies applying to special students are as follows:

- Special Students are allowed to register for a maximum of 6 credits in one discipline
- They do not need approval of program chair
- Graduate courses at the 6000 level are exempt from this policy
- Credit from courses apply to degree only if prerequisites for program are met and student is matriculated
- Students are not permitted to register for courses beyond the 6 semester hours if they have not matriculated or do not have written approval from the appropriate Program chair

Waiver of Course Prerequisites

Waivers of course prerequisites, when authorized, are not to be construed either as waivers of degree program matriculation requirements or as waivers of credit hours required to complete a program.

Retention in a Graduate Degree Program

To maintain enrollment in a Graduate Program, students must:

- Maintain a cumulative average of 3.0
- Adhere to the ethical/professional standards as defined by the profession and/or the academic department

Probation and Dismissal

A student is placed on probation:

- If in any semester the student fails to maintain a 3.0 cumulative average. The student may remain on probation for two semesters or until the cumulative average is again 3.0
- If after two semesters the student's average remains below 3.0 he/she will be dropped from the program

A student will be dismissed from the program:

- If the cumulative average falls below 2.75
- If the student has accumulated more than 6 semester hours with a grade of 2.0 even though the cumulative average remains 2.75 or higher
- If the student has received a grade of 0.0
- If the student has received two Withdrawals

Course Load

The course load for a part-time graduate student is 3 to 6 credit hours per Fall and/or Spring semester. These requirements preclude a greater load when a student has full-time employment.

The course load for a full-time graduate student is 9 credit hours per fall and spring semester.

The course load for half-time status is 5 credit hours.

The course load for a full-time Graduate Assistant is 6 semester hour per fall and spring semester.

The maximum course load for any student during winter session and each summer term is 6 credit hours.

Any student registering for credit beyond the normal load must submit a written request seeking approval from Graduate Dean prior to registering. Academic petition forms are available in the Graduate Office or from Advisors.

Continued Progress Toward Degree

Students working toward a degree who do not register for classes for a full academic year (fall, spring, and summer) must request a leave of absence by writing to the Graduate Dean. Without an approved request a student is withdrawn from the degree program.

Readmission to Degree Program

A student who has been withdrawn from the program because of failure to request a leave of absence may reapply to the program.

A student who has been withdrawn from the program for academic reasons may not register for further degree courses at Fitchburg State College. After a minimum time period of one year, a student may petition the Graduate Council for readmission.

Readmission is contingent on the capability of the student to maintain at least a 3.0 GPA and on evidence of there are sufficient courses remaining in the student's program to achieve the 3.0.

The program/policies in effect at the time of readmission are those that the student must follow.

Grading System

4.0	Superior
3.0 or 3.5	Good
2.0 or 2.5	Passing
0	Failure
W	Withdrew
IN	Incomplete

Incomplete Course

Incompletes (IN) may be awarded when the student has completed 80% of the course work but has missed the final exam because of illness or some other serious reason. A student who has received an Incomplete in lieu of a course grade must make up the missing part of his/her course work during the first four weeks of the following semester. Failure to do so results in an automatic 0 for the course.

Withdrawal from Courses

Withdrawal may be made prior to the eighth class for regularly scheduled courses and prior to the eighteenth class hour for special scheduling or institute courses without academic penalty. Withdrawals may be initiated by phone by calling the Graduate and Continuing Education Office, or by visiting that office in the Sanders Administration Building. In either case, the student must receive a confirming copy of the completed Course Withdrawal Form.

Students who "withdraw" by simply not attending class, automatically receive a failing grade for the course.

Cancellation of Course

The college may cancel courses for insufficient enrollment or for other reasons deemed to be in the best interest of the college. Students who sign up for a course which is canceled may transfer to another course or receive a full refund of tuition and fees.

Course Changes

Changes to courses must be made before the second meeting. (Class meeting time defined as 2.5 hours) No change in credit is permitted after the second class meeting. After the start of the second class meeting, the dropping of a class will be considered a withdrawal.

Change to Audit

A change from graduate credit to audit status must be made before the third class meeting of a course.

Audit

Students may enroll in courses on an audit (or non-credit) basis. The availability of seating in all classes is determined after all matriculated students, program applicants and credit-seeking students have registered. Permission of the instructor and the Graduate Dean is required prior to registration. Tuition and fees for audited courses are the same as those which apply to the courses when taken for academic credit. Students enrolled on an audit basis must have completed all applicable course prerequisites in order to have achieved the sufficient level of knowledge and expertise required by the course content. Students who elect the audit option may be required to complete course assignments, papers, presentations, etc. Final grades are not issued, however, courses audited will be so noted on the student's transcript. A change from credit to audit status, or from audit to credit status, must be made before the third class meeting of the course.

Independent Study Credit Policy

A maximum of six Independent Study credits is allowed in a master's degree program. Before embarking on an Independent Study applicants must receive approval from their advisor and the Graduate Dean. Forms may be obtained in the Graduate Office. Approval is generally granted when an equivalent course is not regularly offered on campus. Independent studies are supervised by on-campus faculty. Vouchers, graduate assistant tuition waivers, and veterans tuition benefits may **not** be applied to independent study.

Second Master's Degree

Students holding a Master's degree from Fitchburg State College are generally not encouraged to enroll in a second Master's degree program but may want to consider a Certificate of Advanced Graduate Study (CAGS) program. To matriculate in a second Master's degree program the student must petition the Graduate Council for its approval.

Graduation Requirements

Students must maintain a minimum cumulative GPA of 3.0 in the degree program, and adhere to all program specific requirements. Degrees are awarded annually in May of each year. **An application for graduation must be filed with the Registrar's Office by January 1 of the year of anticipated graduation.**

Time Limits

Master's degree programs must be completed within six years of the date of the student's first course in the program.

Petition for Review

Students must request a review of their folder prior to the semester in which they will complete requirements for the degree. Application for Graduation Forms must be submitted to the Registrar's Office prior to January 1 to qualify for May graduation. Obtain forms from the Graduate Office or the Registrar's Office.

Grievance Procedure

A student who is dissatisfied with a grade received or with any other aspect of instruction in a particular course has the right to confer with the instructor. If the instructor's reasons for awarding the grade are not satisfactory to the student, they may appeal in writing to the Graduate Dean. The Dean either adjudicates the situation or seeks the advice of the Graduate Council.

Educational Certification Programs

The Fitchburg State College Graduate Division offers courses which may be used for certification purposes in several different areas, including Special Education, Counseling, School Administration, etc. Certification is the function of the Commonwealth's Bureau of Certification, not the college.

Students are advised to address any question regarding certification to:

Bureau of Teacher Preparation Certification and Placement
350 Main Street
Malden, Massachusetts 02148-5023
617-388-3300

Transcripts

Transcripts are prepared upon submission of a transcript request form. Please include your social security number and degree area. Transcripts are free of charge.

To obtain a transcript write to:

Office of the Registrar
Fitchburg State College
160 Pearl Street
Fitchburg, MA 01420-2697

Graduate Programs

Fitchburg State's Division of Graduate and Continuing Education schedules both undergraduate and graduate-level courses. Most programs are offered in the evenings; some may be offered on weekends or during the days in summer or winter session.

The Graduate Division offers programs of study leading to the following Graduate degrees:

Certificate of Advanced Graduate Study (CAGS)

Consultation and Peer Leadership

Educational Leadership and Management
- Higher Education Administration
- School Principal
- Supervisor/Director

Interdisciplinary Studies

Professional Staff Development

Master's Degrees

Master of Arts

Biology

English

History

Master of Arts in Teaching

Biology*

Earth Science*

English*

History*

Mathematics*

Master of Business Administration

Accounting

Human Resources

Management

Master of Education

Arts Education

Educational Leadership and Management

Early Childhood Education*

Elementary Education*

Middle School Education*

Occupational Education

Science Education

Secondary Education

Special Education*
- Teacher of Students with Intensive Special Needs
- Teacher of Students with Special Needs
- Special Education: Guided Study

Technology Education (Industrial Arts)

Master of Science

Communications/Media

Computer Science

Counseling
- Marriage and Family Therapy
- Mental Health Counseling
- School Guidance Counseling (N-9), (5-12)
- School Adjustment Counseling (N-12)

Criminal Justice

Nursing (Forensic)

Certificate Programs

Adolescent and Family Therapy

Child Protective Services

Communications/Media

Early Intervention

Educational Technology

Fine Arts Director Program

Forensic Case Work

Forensic Nursing

Professional Mentoring for Teachers

Substance Abuse Services

Traumatic Brain Injury Education and Neurorehabilitation

** Options include a core curriculum which leads to certification in the field.*

GRADUATE DIVISION

Certificate of Advanced Graduate Study (CAGS)

General Philosophy
Fitchburg State College's CAGS programs are designed to meet well-defined career needs of professionals who have earned an appropriate Master's degree and who wish to attain greater competency in a combination of areas of study within one of the major CAGS fields offered.

General Description of Program
Each student's CAGS program is planned under the direction of an advisor and is built on the academic background, professional position, and career goals of the student. CAGS programs consist of an integrated core curriculum, supervised professional practice, an Internship, and elective courses.

General Program of Study
Upon acceptance into the program, the student's plan of study is developed with and approved by an advisor, who works with the student over the course of study. A minimum of thirty approved graduate credits is required to complete the CAGS with the following restrictions:

- CAGS courses may not repeat work previously accomplished by the student in other graduate degree study
- CAGS credits must be earned in Graduate-level courses

Details regarding the CAGS curricula, including information about required and elective courses, may be found in the specific CAGS program descriptions which follow.

CAGS—Consultation and Peer Leadership

Graduate Committee
Dr. Anne May, EdD, Chair
Dr. Patricia Barbaresi, PhD
Dr. Shari Stokes, EdD

Program Objectives
The CAGS program in Consultation and Peer Leadership is designed to provide teachers with skills to guide institutions in school reform, restructuring initiatives, and school operations. The program is designed for teachers who want to affect the educational process for which they share accountability.

Program Description
CAGS students in Consultation and Peer Leadership acquire an orientation of collegiality and support while becoming competent in the areas of communication, consultation, change facilitation, leadership, reflection, problem solving, and evaluation. They prepare for the role of instructional leader and mentor as they engage in research based practices. The course of study allows students to:

- Assist fellow teachers to apply the pedagogy of effective teaching
- Foster effective teaching skills
- Engage in and encourage in others reflective teaching and self analysis
- Employ exemplary coaching/supervisory traits
- Foster the development of students' critical thinking as a fundamental goal of instruction
- Connect teaching, learning, and assessment in a meaningful way
- Create and disseminate useful resources for pre-service and in-service teachers
- Assimilate research-based practices into their existing repertoires and facilitate their inclusion in others
- Acquire supervisory and observational skills that will support teachers in the use of varying styles of teaching
- Develop strategies for teaching students with diverse backgrounds and strengths

Admissions Standards and Criteria

To apply for enrollment in the CAGS in Consultation and Peer Leadership, a student must submit documents as outlined in the Graduate Admissions section as well as:

- A Master's degree from an accredited institution
- An appropriate teaching certificate
- MAT/GRE/GMAT exams not required

Program Requirements

The Certificate of Advanced Graduate Study in Consultation and Peer Leadership requires a total of 36 semester hours as follows:

- Twenty-seven credit hours required course work in Education and Psychology
- Nine credit hours as electives

Program of Study

Required Courses

EDUC/SPED	*9010*	*The Adult Learner*	*3 S.H.*
PSY	*7020*	*Group Dynamics*	*3 S.H.*
EDLM	*9020*	*Collegial Supervision*	*3 S.H.*
EDLM	*9100*	*Dynamics of Planned Change*	*3 S.H.*
SPED	*9200*	*Consultation Strategies*	*3 S.H.*
EDUC/SPED	*9250*	*Educational Strategies*	*6 S.H.*
EDUC/SPED	*9350*	*Internship and Reflective Analysis Seminar*	*6 S.H.*
		Electives	*9 S.H.*
		Total for Certificate	***36 S.H.***

PROFILE

Marie Shack

Graduate Student Alumni

Marie, honored as Outstanding Graduate Student, is a recent graduate of the CAGS program in Educational Leadership. Fitchburg is one of the only schools in Massachusetts to offer the Certification in Art Supervising and Directing, which gave Marie a unique opportunity to enhance her established career in art education. Marie is putting her certification to good use as an art teacher at Wilmington High School, as the Art Liaison for the district, and as the instructor of a class of graduate and undergraduate students from Tufts and the Museum School.

CAGS—Interdisciplinary Studies

Graduate Committee

Harry Semerjian, EdD, Chair
Ronald P. Colbert, EdD
Rosemarie Giovino, EdD
Anita Hotchkiss, PhD
Bonnie House, MFA
Nancy Kelly, PhD
Aparna Mahadev, PhD
Edward Martens, PhD
Caroline Murphy, PhD
Donald Schmidt, PhD
Esmail Valanejad, PhD
Susan Williams, PhD

Program Objectives

The CAGS Program in Interdisciplinary Studies provides the opportunity for students who have completed a Master's degree to continue advanced degree study in two disciplines of their choice.

Program Description

The program allows participants to step out of the confines of their Master's degree and create a program of study based on their interests. This CAGS program invites the student to develop his/her ideas and hypotheses and to acquire new understanding and knowledge in such areas as developing critical thinking skills, improving interpersonal relationships, and employing reflection for intellectual growth. By broadening the individual's background the candidate becomes an effective leader, who has the knowledge and skills to influence institutional reform.

Admissions Standards and Criteria

To apply for enrollment in the CAGS in Interdisciplinary Studies, a student must submit documents as outlined in the Graduate Admissions section as well as:

- A Master's degree from an accredited institution
- MAT/GRE/GMAT exams not required

Program Requirements

Each student's CAGS program is planned and approved under the direction of an advisor and faculty member/professional from both disciplines chosen by the student. The CAGS consists of an integrated core curriculum, supervised professional practice, and/or an Internship and elective courses.

The integrated core curriculum consists of:

- Fifteen advanced graduate credits in two declared disciplines
- A graduate Internship demonstrating specified competencies in the two fields or graduate thesis related to the same
- A structured seminar taken while writing thesis or completing Internship

The student must complete 36 semester hours, which includes 6 semester hours of core course work and 15 semester hours in each of the two academic disciplines.

At the end of formal academic study, the student shall submit a proposal regarding the graduate thesis or Internship. The committee then meets to review the proposal and its criteria for evaluation implementation.

Potential Combined Fields of Study

Arts, Computer Science, Education, Educational Leadership, English, History, Occupational Education, Professional Staff Development, Psychology, Science, Special Education, and/or Women's Studies.*

** Students are not limited to the fields of study listed above.*

Program of Study

Required Core Curriculum

		Fifteen advance graduate credits in each declared discipline	*30 S.H.*
IDIS	*9400*	*Seminar and Internship in Interdisciplinary Studies* ***or***	*6 S.H.*
IDIS	*9500*	*Seminar and Graduate Thesis*	*6 S.H.*
		Total for Certificate	***36 S.H.***

CAGS—Educational Leadership and Management

Graduate Committee

Ronald P. Colbert, EdD, Chair
Patricia N. Barbaresi, PhD
Leslie L. Bernal, EdD
George F. Bohrer, PhD
Roger Bothwell, EdD
Michael Fiorentino, EdD
Charles W. Hetzel, PhD
Kevin O'Malley, EdD
Patricia Robbins, EdD
Kristyn M. Snyer, JD
Anne Tardanico, MEd
Louis Zivic, EdD

Program Objectives

The CAGS in Educational Leadership and Management Program (EDLM) prepares the student to meet the standards of Massachusetts Certification as a Supervisor/Director (N-12) or School Principal (N-6, 5-9, 9-12).

About the Program

The CAGS Program is housed within the Education Department's graduate program. In a collaborative relationship, the EDLM Program promotes the general goals and beliefs of the carefully sequenced graduate program in Early Childhood, Elementary, and Middle School Education. Within this spirit relationships between faculty members in Education and other programs across the college have been allied.

Program Description

The CAGS program in Educational Leadership and Management is designed for students with the desire to:

- Develop competencies in managerial skills related to political arenas, personnel, fiscal affairs, acquisition of material resources, diverse publics and pupil populations, and organizational change
- Strengthen, deepen, and expand the knowledge base in the field of leadership and management in order to anticipate and to solve problems inherent in the educational system
- Demonstrate through course work and field-based experiences the knowledge, skills, and attitudes that are required to lead and manage an educational enterprise effectively and efficiently

The College offers preparation for two Massachusetts Certificates

Principal Certification (N-6, 5-9, 9-12)
Supervisor/Director-Art or Music

This option is for students who wish to supervise or direct Art and/or Music programs in school systems. Successful completion of the degree may be cited as justification for application for state certification as a supervisor/director.

Candidates in other content areas, who wish to supervise or direct, may, in consultation with their advisor, develop a plan of study designed to meet certification requirements, and upon completion of their program may apply directly with the Department of Education.

Higher Education Administration

Students majoring in higher education administration are prepared to assume the role of college administrator, admissions director; student personnel administrator; dean, director of institutional advancement, fund raising, or public relations at junior colleges, senior colleges, and universities.

The key objectives are to prepare and develop the students with the necessary skills and competencies to administer programs in universities, colleges, and junior colleges; to teach and conduct research in educational environments of all types; and to provide leaders for higher educational institutions and its related professions. (See page 215 for program details.)

Non-Certification Candidates

Students who do not wish to pursue certification but plan a program of study including courses from each of the four competency areas, may develop a thirty-six semester hour program that meets their professional and personal goals. Such a program should be planned with and approved by the student's advisor.

Admissions Standards and Criteria

To apply for enrollment in the CAGS in Educational Leadership and Management program, candidates must submit documents as outlined in the Graduate Admission section as well as:

- A Master's degree from an accredited institution
- An appropriate teaching certificate
- Minimum of three years teaching experience
- MAT/GRE/GMAT exams not required

Program Requirements

A minimum of 36 graduate credits is required to complete the CAGS program. Students plan a program of study with their advisor that is based on professional interests and intent. The program includes courses from each of the four competency areas. The courses in these areas are multi-disciplined and cross departmental lines. In addition a supervised practicum and internship is required.

During the practicum/internship, the student becomes involved in a field-based educational administrative experience. Requirements include:

- Practicum is 150 clock hours within one year
- Internship is 300 clock hours within one year
- Students seeking standard certification may complete a 400 clock hour clinical experience
- Thesis (EDLM 9500): A thesis topic is chosen in consultation with the student's advisor early in the last year of study, or not later than the completion of 24 semester hours of study. A student must successfully defend his/her thesis to a committee composed of the thesis advisor and a representative from the Graduate Division chosen by the Dean of Graduate and Continuing Education. **or**
- Comprehensive Exam covering the basic principles and concepts inherent in the field of educational leadership and management
- Students seeking standard certification may complete a 400 clock hour clinical experience

The candidate must notify the graduate division in writing whether they will complete a thesis or take the comprehensive exam after completion of 24 semester hours of study.

Program of Study

Core Courses

EDLM	*8005*	*Foundations of Educational Administration*	*3 S.H.*
EDLM	*9210*	*Practicum and Internship in Leadership and Management*	*6 S.H.*
		Subtotal of core courses	*9 S.H.*

Competency Areas

Political and Fiscal Affairs

EDLM	*7005*	*Politics of Education*	*3 S.H.*
EDLM	*7010*	*Physical Plants and Transportation*	*3 S.H.*
EDLM	*7040*	*Collective Bargaining in Education*	*3 S.H.*
EDLM	*8000*	*Community Relations*	*3 S.H.*
EDLM	*8020*	*Law for the Educator*	*3 S.H.*
EDLM	*8030*	*Public School Finance*	*3 S.H.*
MGMT	*9320*	*Labor Management*	*3 S.H.*

Collegial Leadership and Consultation

EDLM	*7020*	*Organizational Theory and Educational Planning*	*3 S.H.*
EDLM	*7030*	*Introduction to Systems Approaches in Education*	*3 S.H.*
EDLM	*8010*	*Human Resources and Personnel Administration*	*3 S.H.*
EDLM	*9000*	*The Principal: Organization and Administration of Elementary, Middle and Secondary School*	*3 S.H.*
EDLM	*9010*	*Cases and Concepts in Educational Administration*	*3 S.H.*
EDLM	*9020*	*Collegial Supervision*	*3 S.H.*
EDLM	*9100*	*Dynamics of Planned Change*	*3 S.H.*
PSY	*8200*	*Principles of Guidance and Counseling*	*3 S.H.*

Technology for Educators

EDLM	*7000*	*Computer Application in Education*	*3 S.H.*
ETEC	*7800*	*Using the Computer as a Tool for Thinking Skills*	*3 S.H.*
ETEC	*8600*	*Computers and Writing*	*3 S.H.*
ETEC	*9100*	*Seminar in Educational Technology*	*3 S.H.*
ENGL	*8073*	*Computers and Writing*	*3 S.H.*
CRAR	*8146*	*Arts Technology in the Classroom*	*3 S.H.*

Diverse Publics and Populations

EDLM	*7600*	*Managing Diversity*	*3 S.H.*
EDLM	*8040*	*Curriculum Leadership and Evaluation*	*3 S.H.*
EDLM	*8800*	*Administration of Special Education Programs*	*3 S.H.*
SPED	*7000*	*Survey of Special Education*	*3 S.H.*
IDIS	*9065*	*Women in Contemporary Society*	*3 S.H.*
CRAR	*8145*	*Celebrating Diversity through the Arts*	*3 S.H.*
PSY	*8100*	*Child Abuse and Neglect*	*3 S.H.*

Option A: School Principal Core Courses ***9 S.H.***

EDLM	*8000*	*Community Relations*	*3 S.H.*
EDLM	*8010*	*Human Resources and Personal Administration*	*3 S.H.*
EDLM	*8020*	*Law for the Educator*	*3 S.H.*
EDLM	*8030*	*Public School Finance*	*3 S.H.*
EDLM	*8040*	*Curriculum Leadership and Evaluation*	*3 S.H.*
EDLM	*8050*	*Seminar: Research in Educational Leadership*	*3 S.H.*
EDLM	*9000*	*The Principal: Organization and Administration of the Elementary, Middle and Secondary School*	*3 S.H.*
EDLM	*9010*	*Cases and Concepts in Educational Administration*	*3 S.H.*
		Elective	*3 S.H.*
		Total for CAGS	***36 S.H.***

Option B: Supervisor/Director-Art or Music

Core Courses			**9 S.H.**
EDLM	*8000*	*Community Relations*	*3 S.H.*
EDLM	*8010*	*Human Resources and Personal Administration*	*3 S.H.*
EDLM	*8020*	*Law for the Educator*	*3 S.H.*
EDLM	*8030*	*Public School Finance*	*3 S.H.*
CRAR	*9051*	*Supervising, Directing and Leading in Arts Ed. I*	*3 S.H.*
CRAR	*9052*	*Supervising, Directing and Leading in Arts Ed. II*	*3 S.H.*
CRAR	*9060*	*Creative Arts Research*	*3 S.H.*
CRAR	*9070*	*Creative Arts Curriculum Development and Applications*	*3 S.H.*

Students choose either the following two courses or a thesis to complete the core specialization:

EDLM	*9020*	*Collegial Supervision and*	*3 S.H.*
EDLM	*9100*	*Dynamics of Planned Change* ***or***	*3 S.H.*
EDLM	*9500*	*Thesis*	*6 S.H.*
		Total for CAGS	***36 S.H.***

CAGS—Educational Leadership and Management: Higher Education Administration

Graduate Committee

Ronald Colbert, EdD, Chair
Patricia Barbaresi, PhD
Leslie Bernal, EdD
George F. Bohrer, PhD
Roger Bothwell, EdD
Michael Fiorentino, EdD
Charles W. Hetzel, PhD
Kevin O'Malley, EdD
Patricia Robbins, EdD
Harry Semerjian, EdD
Kristyn M. Snyder, JD
Anne Tardanico, MEd
Saul Torres, EdD
Louis Zivic, EdD

Program Objectives

The key objectives of the CAGS in Educational Leadership and Management: Higher Education Administration Program are to prepare and develop students with the necessary skills and competencies to administer programs in universities, colleges, and junior colleges; to teach and conduct research in educational environments of all types; and to provide leaders for higher educational institutions and its related professions.

Program Description

The CAGS program in Educational Leadership and Management: Higher Education Administration is designed for students with the desire to:

- Assume the role of college administrators and policy makers, admissions directors, student personnel administrators, deans, directors of institutional advancement, fund raising at junior colleges, senior colleges, and universities.
- Pursue executive positions in cultural, educational, business, government, public policy, and human service organizations and agencies.
- Demonstrate through course work and field-based experiences the knowledge, skills, and attitudes that are required to lead and manage an educational enterprise effectively and efficiently.

Cohorts and Careers

The CAGS program is deliberately limited in enrollment and to students with interests related to the program areas of concentration to assure attention to the student's professional needs. Students come from varied academic backgrounds and institutional types and usually have some experience working in a higher education setting. Each entering cohort of students share some common courses and experiences.

Most students enter administrative, analytic or policy positions. Their initial work usually is in positions reflecting their areas of concentration in settings such as:

- University, college or community college administration;
- Public policy organizations and agencies in postsecondary education;

Postsecondary continuing education in higher educational institutions, professional association, business or government.

Admissions Standards and Criteria

To apply for enrollment in the CAGS in Educational Leadership and Management program, candidates must submit documents as outlined in the Graduate Admissions section as well as:

A Master's degree from an accredited institution

MAT/GRE/GMAT exams not required

Program Requirements

A minimum of 36 graduate credits is required to complete the CAGS program. The program curriculum consists of:

Three Transition Courses from the general Educational Leadership and Management track

A core of tightly-focused Concentration Courses intended to increase the student's knowledge about and understanding of the interrelated, societal, institutional, and personal dimensions, of higher and postsecondary education.

An Internship is of 300 clock hours within one year, allowing each student to link their academic work to their own professional development needs.

Program of Study

Transition Courses

The following are the basic courses required of CAGS students in the Educational Leadership and Management program:

EDLM	*8010*	*Human Resources*	*3 S.H.*
EDLM	*8020*	*Law for the Educator*	*3 S.H.*
EDLM	*8050*	*Seminar: Research in Educational Leadership*	*3 S.H.*

Concentration Courses

EDLM	*9020*	*History of Higher Education*	*3 S.H.*
EDLM	*9030*	*Leadership Theory*	*3 S.H.*
EDLM	*9040*	*Organizational Change*	*3 S.H.*
EDLM	*9050*	*College and University Teaching*	*3 S.H.*
EDLM	*9060*	*Social Context*	*3 S.H.*
EDLM	*9070*	*Strategic Planning in Higher Education*	*3 S.H.*
EDLM	*9080*	*Practicum in Higher Education Administration*	*6 S.H.*
		Elective Course	*3 S.H.*
		Total for CAGS	***36 S.H.***

CAGS—Professional Staff Development

Graduate Committee
George Bohrer, PhD, Chair
Ronald Colbert, EdD
Charles P. Conroy, EdD
Claudia Gallant, MA
Anne May, EdD

Program Objectives

The CAGS program in Professional Staff Development is designed to prepare faculty and staff teams from applicant schools to design and deliver quality staff development programs to teachers and administrators in their public or private schools. The program strives to enable the participants to create a vision for the reform of their school system and to have the skills to act on that vision.

Program Description

The CAGS Program in Professional Staff Development addresses the specific goals and staff development needs of the applicant's parent school system. Graduate students enrolled in the program are staff members in the particular system of study. The three year program, developed in collaboration with the school's administration and faculty staff, is delivered within the school system. Thus, the program is a true partnership between Fitchburg State College and a designated Public School System.

This nationally recognized program has been cited as a unique collaborative model for school system renewal and school reform by the National Staff Development Council.

The program combines theoretical study, cooperative and experimental learning, as well as supervised intern opportunities. The curriculum draws upon multiple perspectives with a core of studies emphasizing:

- Adult development
- The study and analysis of effective teaching
- Group theory and group skills
- Consultation and supervision models
- Processes of staff development
- The dynamics of planned change
- School-based research

The methods of instruction employed by graduate professors closely parallel the adult learning strategies studied. Program implementation models and supports the anticipated field-based outcomes.

Admissions Standards and Criteria

An applicant for enrollment in the CAGS program in Professional Staff Development at Fitchburg State College should be one of a cadre of 15 to 18 students from a designated school system. Interested faculty and staff should coordinate with their school principal and superintendent prior to applying. The parent school system must enter an agreement with Fitchburg State College before applicants can be accepted into the program. Each individual applicant is required to submit documents as outlined in the Graduate Admissions section as well as:

- An official transcript of a Master's degree from an accredited institution
- MAT/GRE/GMAT exams not required

Program of Study

PDEV	*9000*	*Effective Instructional Processes: Theory to Practice*	*6 S.H.*
PDEV	*9200*	*Staff Development Programs: Design, Management and Evaluation*	*6 S.H.*
PDEV	*9300*	*Research Seminar in Education*	*3 S.H.*
EDLM	*9100*	*Dynamics of Planned Change*	*3 S.H.*
PDEV	*9400*	*Seminar and Internship in Staff Development*	*6 S.H.*
PDEV	*9500*	*Graduate Thesis*	*3 S.H.*
		Electives in Master's Field of Study	*6 S.H.*
		Total for CAGS	***33 S.H.***

Master of Arts/Master of Arts in Teaching

MA/MAT—Biology

Graduate Committee
George Babich, PhD, Chair
Margaret Hoey, PhD
Howard Thomas, PhD
Graduate Student Representative

MAT Education Coordinator
Nancy Kelly, PhD

Program Objectives

The Master of Arts (MA) in Biology is designed to prepare the student for a career in Biology, Environmental Science, or for advanced study. The Master of Arts in Teaching (MAT) Biology prepares the candidate for Standard Certification at the secondary level.

Program Description

The MA program in Biology offers a flexible program of study designed to provide the best scientific experience and the most comprehensive exposure to biological literature available. Specifically, the MA program in Biology aims to:

- Promote graduate-level scholarship and the development of a strong scientific philosophy in the biological sciences
- Apply sound, scientific thinking to analyze biological issues in society and new discoveries in science
- Demonstrate an understanding of how science, ethics, and technology are related
- Develop strong critical thinking skills through the use of experimental investigation
- Develop various skills needed for employment within the scientific-technical community
- Demonstrate individual research abilities and communication skills through a thesis program or an independent research project

The Master of Arts in Teaching Biology program combines a core curriculum of both Biology and Education to give Graduates a strong background in Biology while providing the skills for the complex process of teaching. The combination enables teachers to:

- Demonstrate the application of a wide range of biological knowledge including a bioethical perspective
- Expand their strategies for teaching science from a multicultural, gender-balanced perspective
- Demonstrate the ability to communicate verbally, orally, and quantitatively
- Develop strong critical thinking skills through the use of experimentation and integrate these skills into teaching

*Students without provisional certification may be admitted to the program, but will be required to complete additional course work leading to Provisional Certification with Advanced Standing including 75 hours of pre-practicum experiences and a 150 hour practicum.

Admissions Standards and Criteria

Applicants to the MA/MAT in Biology program must submit documents as outlined in the Graduate Admissions section as well as:

- An official transcript of a Bachelor's degree from an accredited institution, preferably with (but not limited to) a major or minor in biology or an allied discipline
- The official results of the Graduate Record Exam (GRE)

Notes: Applicants with inadequate preparation will be required to take prerequisite courses prior to admission.

Students interested in the thesis option should contact a potential graduate advisor as part of the application process.

Program Requirements

The Masters of Arts in Biology program has a thesis and non-thesis track. Each track provides the student with a solid investigative core balanced by content course work. During the first year each student completes a biology seminar during which the student's writing and communication skills are evaluated. The thesis committee (comprised of the thesis advisor and at least two other graduate faculty) helps the student design a series of courses (electives) which aid him/her in successfully completing the thesis.

Students in the MAT programs complete 15 credits in biology to include at least one course in each of the following areas: ecology, molecular biology, genetics, developmental biology, environmental science and botany. Other areas of biology may also apply. In addition MAT candidates must complete 21 credits in Education courses directly related to certification requirements.

Program of Study

MA in Biology

Content Core in Biology			**15 S.H.**
BIOL	*7400*	*Bioethics*	*3 S.H.*
BIOL	*9004*	*Research in Biology*	*3 S.H.*
BIOL	*9011*	*Seminar in Biology*	*3 S.H.*
BIOL	*9010*	*Thesis*	*4-6 S.H.*
		Electives	*14-18 S.H.*
		Total for Degree	***36 S.H.***

MAT in Biology

Content Core in Biology			**15 S.H.**
Core Education Courses			
BIOL	*7500*	*Advanced Methods of Teaching at the Secondary Level I*	*3 S.H.*
BIOL	*7550*	*Advanced Methods of Teaching at the Secondary Level II*	*3 S.H.*
BIOL	*8250*	*Curriculum and Technology*	*3 S.H.*
BIOL	*8260*	*Curriculum Design and Development*	*3 S.H.*
EDUC	*8300*	*Research in Education*	*3 S.H.*
BIOL	*9500*	*Internship*	*6 S.H.*
		Total for Degree	***36 S.H.***

Additional Requirements for Student Who Do Not Have Provisional Certification with Advanced Standing

Students who do not have provisional certification with advanced standing take additional course work in the first year of the program leading to that level of certification. This includes:

Undergraduate Credits			
PSY	*2230*	*Adolescent Psychology*	*3 S.H.*
Graduate Credits			
EDUC	*7016*	*Perspectives in Secondary Education*	*1 S.H.*
EDUC	*7012*	*The Modern Secondary School (Includes 75 pre-practicum hours)*	*3 S.H.*
SCED	*9000*	*Methods in Teaching Biology and Earth Science*	*3 S.H.*
BIOL	*8090*	*Practicum*	*6 S.H.*

To be eligible for the practicum, students must have an appropriate base in the discipline as approved by their advisor and completed all of the above courses. The practicum (student teaching) is taken in conjunction with the Advanced Methods in Teaching I course.

MAT—Earth Science

Graduate Committee
Robert Champlin, PhD, Chair
James Barbato, PhD

MAT Education Coordinator
Nancy Kelly, PhD

Program Objectives

The Master of Arts in Teaching (MAT) Earth Science program is designed for students with provisional certification with advanced standing who are seeking standard certification as secondary school teachers of Earth Science. The program produces professional teachers who are able to combine a solid base of scholarship in a specific academic discipline with effective teaching strategies based on the findings of research.

Program Description

The MAT in Earth Science program offers graduate students rigorous scholarship within a specific academic discipline in combination with the pedagogical tools and strategies necessary for the most effective classroom teaching. The program is designed to prepare secondary school teachers for the twenty-first century and to provide models of exemplary teaching methods. Through involvement in intensive, supervised clinical experiences in the secondary school, candidates enhance their skills as educators and learn to analyze and evaluate effective teaching in their academic discipline. The program of study:

- Promotes the development of a scholar-teacher with a strong background in Earth Science, as well as skills in the complex process of teaching Earth Science
- Demonstrates the application of a wide range of scientific knowledge including theoretical, ethical, and experimental perspectives
- Suggests ways to integrate the role of women and racial and ethnic groups into traditional Earth Science courses
- Enables teachers to incorporate multicultural and gender-balanced perspectives into their strategies for teaching
- Develops rigorous critical thinking skills and integrates these skills into their teaching
- Inculcates a sound philosophy of teaching
- Enables students interested in Earth Science to pursue advanced studies
- Corresponds with the certification requirements of the Department of Education of the Commonwealth of Massachusetts

Admissions Standards and Criteria

To apply for enrollment in the Master of Arts in Teaching Earth Science program, students must submit documents as outlined in the Graduate Admissions Section as well as:

- Proof of an undergraduate major in Earth Science or a relevant discipline (at least 30 credits)

Program Requirements

Students in the MAT program in Earth Science must complete:

- Fifteen credits in Earth Science, including at least one course in each of the following areas: geology, astronomy, meteorology, and/or oceanography and ecology
- Additional Earth Science course work to meet the categories of Standard I, if the student enters the program with inadequate preparation in Earth Science at the undergraduate level
- Clinical core of five courses including: Advanced Methods of Teaching at the Secondary Level I and II, Curriculum Design and Development, Research in Education, and a Clinical Experience or Internship

Students work closely with an advisor in the academic concentration to design individual programs to further their knowledge, scholarship, and subject-related teaching skills.

Program of Study

		Content Core in Earth Science	*15 S.H.*
		Core Education Courses	*21 S.H.*

Content Core in Earth Science

Choose five of the seven courses listed:

ESCI	*7007*	*Ecology*	*3 S.H.*
ESCI	*7100*	*New England's Glacial Landscape*	*3 S.H.*
ESCI	*7200*	*Observational Astronomy*	*3 S.H.*
ESCI	*7300*	*Meteorology*	*3 S.H.*
ESCI	*7400*	*Oceanography*	*3 S.H.*
ESCI	*8100*	*Environmental Geology*	*3 S.H.*
ESCI	*9100*	*Independent Study*	*3 S.H.*
		Total	***15 S.H.***

Professional Clinical Core*

ESCI	*7500*	*Advanced Methods of Teaching at the Secondary Level I*	*3 S.H.*
ESCI	*7550*	*Advanced Methods of Teaching at the Secondary Level II*	*3 S.H.*
ESCI	*8250*	*Curriculum and Technology*	*3 S.H.*
ESCI	*8260*	*Curriculum Design and Development*	*3 S.H.*
EDUC	*8300*	*Research in Education*	*3 S.H.*
ESCI	*9500*	*Internship*	*6 S.H.*
		Total for Degree	***36 S.H.***

** The clinical core experience must include a research project. The proposal is developed in the Research in Education Course and conducted during the clinical experience or internship.*

Additional Requirements for Student Who Do Not Have Provisional Certification with Advanced Standing

Students who do not have provisional certification with advanced standing take additional course work in the first year of the program leading to that level of certification. This includes:

Undergraduate Credits

PSY	*2230*	*Adolescent Psychology*	*3 S.H.*

Graduate Credits

EDUC	*7016*	*Perspectives in Secondary Education*	*1 S.H.*
EDUC	*7012*	*The Modern Secondary School (Includes 75 pre-practicum hours)*	*3 S.H.*
SCED	*9000*	*Advanced Methods in Science Teaching*	*3 S.H.*
ESCI	*8090*	*Practicum*	*6 S.H.*

To be eligible for the practicum, students must have an appropriate base in the discipline as approved by their advisor and completed all of the above courses. The practicum (student teaching) is taken in conjunction with the Advanced Methods in Teaching I course.

MA/MAT—English

Graduate Committee
Marilyn A. McCaffrey, EdD, Chair
Roberta Adams, PhD
Janice Alberghene, PhD
Chola Chisunka, PhD
Arnold Gordenstein, PhD
Nancy Kelly, PhD
William Keough, PhD
Irene Martyniuk, PhD
Thomas Murray, PhD
Donelle Ruwe, PhD
Nancy Yee, PhD

MAT Education Coordinator
Nancy Kelly, PhD

Program Objectives

The Master of Arts (MA) in English is designed for students pursuing careers in literature, writing, and research, and post-secondary teaching. The Master of Arts in Teaching (MAT) English program provides a dual emphasis on content courses in literature and writing, and professional courses in the teaching of English. The MAT Clinical Track leads to standard certification at the secondary level as a teacher of English.

Program Description

The MA program in English is designed to train professional educators, writers, and communicators to understand and employ a variety of strategies in literature, research, writing, and/or teaching.

The MA program aims to:

- Promote graduate-level scholarship in the study of literature
- Encourage the development of a wide range of literary knowledge, including a global perspective
- Exploration of the major literary theories and the history of English as a discipline
- Provide a wide range from Medieval Literature and Shakespeare's Major Plays to Twentieth Century Women's Fiction and Africa Through the Novel
- Polish and expand writing style and techniques
- Explore the major literary theories and the history of English as a discipline

The MAT program is designed to develop the scholar-teacher by providing a strong background in English and skills for the complex process of teaching English. The MAT program aims to:

- Bridge the gap between cutting-edge scholarship and classroom practice
- Demonstrate the application of the divergent theories of the 1990s on the content of English and classroom practice
- Suggest ways to integrate the voices of women and minorities into the traditional literary canon
- Enable practicing teachers to expand strategies for teaching writing through the use of process writing, collaborative writing, and writing on the computer
- Enable practicing teachers to expand strategies for teaching literature through the application of current modes of criticism

Admissions Standards and Criteria

To apply for enrollment in the Master of Arts in English program, a student must submit documents as outlined in the Graduate Admissions section as well as:

- An official transcript of a Bachelor's degree from an accredited institution, preferably with (but not limited to) a major or minor in English

Note: Applicants with inadequate preparation for success in the program are required to take undergraduate courses in English prior to admission. For those pursuing certification there may be additional prerequisite courses, depending upon previous course work in education.

MA in English Program of Study

The MA in English Program offers two tracks:

Track A—Literature

Courses in specific periods and genres in American, British, and World Literature as well as literary research and theory are required.

ENGL	*8150*	*Research and Study in English*	*3 S.H.*
		Six 9000-Level Literature Courses	*18 S.H.*
		Electives in English	*12 S.H.*
		Master's Thesis:	
		Students with the approval of the Graduate Committee may choose to do a thesis in place of two English electives.	
		Total for Degree	***33 S.H.***

Track B—History and Literature of Women

Required Core

		Research and Study in English	*3 S.H.*
		Historiography	*3 S.H.*
		Seminar in the History and Literature of Women	*3 S.H.*
		Subtotal	*9 S.H.*

Women's History and Literature Courses

		Two courses in the History of Women	*6 S.H.*
		Two courses in the Literature of Women	*6 S.H.*
		Subtotal	*12 S.H.*

Electives in History and Literature of Women

		Two courses in the Literature of Women	*6 S.H.*
		Course in the History of Women	*3 S.H.*
		Subtotal	*9 S.H.*

Master's Thesis

		Thesis Writing	*6 S.H.*
		Total	***36 S.H.***

Master of Arts in Teaching Program of Study

Track A—Master of Arts in Teaching

Track A of the MAT in English program is designed for students interested in studying the theories, methodologies, and materials for teaching English in the middle and secondary schools in addition to broadening their knowledge of literature.

Course Requirements

ENGL	*8150*	*Graduate Research and Study in English*	*3 S.H.*
		Two 9000-Level Literature Courses	*6 S.H.*

Three of the following courses:

ENGL	*8070*	*Literature in the Classroom: Readers, Texts, and Teachers*	*3 S.H.*
ENGL	*8071*	*Literature for Young Adults*	*3 S.H.*
ENGL	*8073*	*Computers and Writing* ***or***	*3 S.H.*
ENGL	*8076*	*Process Writing Across the Curriculum*	*3 S.H.*
ENGL	*8000*	*One 8000 Level English-Education Elective*	*3 S.H.*
		English courses approved by the Advisor	*15 S.H.*
		Total for Degree	***33 S.H.***

Track B—Master of Arts in Teaching

Track B of the MAT in English program is designed to provide students with the necessary course work for Standard Certification* as teachers of English.

Course Requirements

		Four Literature Courses	*12 S.H.*
ENGL	*8070*	*Literature in the Classroom: Readers, Texts, and Teachers*	*3 S.H.*
ENGL	*8073*	*Computers and Writing* ***or***	*3 S.H.*
ENGL	*8076*	*Process Writing Across the Curriculum*	*3 S.H.*
ENGL	*8150*	*Graduate Research and Study in English*	*3 S.H.*

Clinical Core

ENGL	*7500*	*Advanced Methods of Teaching at the Secondary Level I*	*3 S.H.*
ENGL	*7550*	*Advanced Methods of Teaching at the Secondary Level II*	*3 S.H.*
ENGL	*8250*	*Curriculum and Technology*	*3 S.H.*
ENGL	*8260*	*Curriculum Design and Development*	*3 S.H.*
ENGL	*9500*	*Internship*	*6 S.H.*
		Total for Degree	***39 S.H.***

** Students applying for Track B who do not have Provisional Certification, may be admitted to the program, but will be required to complete additional course work leading to Provisional Certification with Advanced Standing including 75 hours of pre-practicum experiences and a 150 hour practicum.*

Additional Requirements for Students Who Do Not Have Provisional Certification with Advanced Standing

Students who do not have provisional certification with advanced standing take additional course work in the first year of the program leading to that level of certification. This includes:

Undergraduate Credits

PSY	*2230*	*Adolescent Psychology*	*3 S.H.*

Graduate Credits

EDUC	*7016*	*Perspectives in Secondary Education*	*1 S.H.*
EDUC	*7012*	*The Modern Secondary School (Includes 75 pre-practicum hours)*	*3 S.H.*
ENGL	*8076*	*Process Writing Across the Curriculum*	*3 S.H.*
ENGL	*8090*	*Practicum*	*6 S.H.*

To be eligible for the practicum, students must have an appropriate base in the discipline as approved by their advisor and completed all of the above courses.

MA/MAT—History

Graduate Committee
Susan Williams, PhD, Chair
Sibyl Brownlee, PhD
Benjamin Lieberman, PhD

MAT Education Coordinator
Nancy Kelly, PhD

Program Objectives

The Master of Arts (MA) in History is designed for students pursuing careers in historical research, writing, or post-secondary level teaching. The Master of Arts in Teaching (MAT) History combines advanced studies in both history and the teaching of history. The MAT Clinical Track (Track B) leads to Standard Certification at the secondary level as a teacher of history.

Program Description

The curriculum for both the MA and MAT programs aims to:

- Promote graduate-level historical scholarship
- Support and encourage the development of a wide range of historical knowledge, including a global perspective

Additionally, the MAT program strives to:

- Expand the scholar/teacher's skills in the complex process of teaching history
- Enable practicing teachers to expand their strategies for teaching history from a multicultural, gender-balanced perspective

Admissions Standards and Criteria

To apply for enrollment in either the Master of Arts or Master of Arts in Teaching History programs, students must submit documents as outlined in the Graduate Admissions section as well as:

- An official transcript of a Bachelor's degree from an accredited institution, preferably with (but not limited to) a major or minor in History

Note: Applicants with inadequate preparation in history are required to take undergraduate courses in history prior to admission.

Program Requirements

The MA program requires 36 hours of academic work, including completion of a master's thesis. Two tracks are available, described in the program of study. All degree candidates must pass a written comprehensive examination with questions in at least two different historical areas and an oral thesis defense. Details regarding advancement to candidacy are available from the History Department.

The MAT program has two tracks. Both tracks include a content core in history.

Track A is for teachers who are already certified and seeking advanced studies in history and the teaching of history.

Track B is for students with Provisional Certification with Advanced Standing who seek Standard Certification*. In addition to the content core, students must complete a 21-credit clinical core of education courses designed to fulfill requirements for Standard Certification.

MA in History Program of Study

The MA in History Program offers two tracks.

Track A—Master of Arts

Course requirements for Track A of the MA are:

One course in each of three areas:

European History	*3 S.H.*
U.S. History	*3 S.H.*
Non-Western History	*3 S.H.*
Historiography	*3 S.H.*
Elective	*3 S.H.*
Area of Specialization, to include at least two seminars	*15 S.H.*
Thesis	*6 S.H.*
Total for Degree	***36 S.H.***

Track B—Master of Arts

Track B focuses on the History and Literature of Women.

Course requirements for Track B of the MA degree are:

Required Core

Graduate Study and Research in English	*3 S.H.*
Historiography	*3 S.H.*
Seminar in the History and Literature of Women	*3 S.H.*
Subtotal	*9 S.H.*

Women's History and Literature Courses

Course in the History of Women	*3 S.H.*
Course in the History of Women	*3 S.H.*
Course in the Literature of Women	*3 S.H.*
Course in the Literature of Women	*3 S.H.*
Subtotal	*12 S.H.*

Electives in History and Literature of Women

Course in History	*3 S.H.*
Course in History	*3 S.H.*
Course in Literature	*3 S.H.*
Subtotal	*9 S.H.*

Master's Thesis

Thesis Writing	*6 S.H.*
Total for Degree	***36 S.H.***

MAT in History Program of Study

The MAT in History offers two tracks.

Requirements

Students in both tracks of the MAT degree program complete a 15 credit content core in history including at least one course in each of the following areas:

Non-Western History	*3 S.H.*
World History	*3 S.H.*
U.S. History	*3 S.H.*
European History	*3 S.H.*
History Elective	*3 S.H.*
Sub-total	*15 S.H.*

Track A—Master of Arts in Teaching

Content Core in History	*15 S.H.*
Area of Specialization	*15 S.H.*
Historiography	*3 S.H.*
Relationship Between History and Other Fields of Knowledge in the Social Science	*3 S.H.*
Total for Degree	***36 S.H.***

Track B—Master of Arts in Teaching

		Content Core in History	*15 S.H.*
Core Education Courses			
HIST	*7500*	*Advanced Methods of Teaching at the Secondary Level I*	*3 S.H.*
HIST	*7550*	*Advanced Methods of Teaching at the Secondary Level II*	*3 S.H.*
HIST	*8250*	*Curriculum and Technology*	*3 S.H.*
HIST	*8260*	*Curriculum Design and Development*	*3 S.H.*
EDUC	*8300*	*Research in Education*	*3 S.H.*
HIST	*9500*	*Internship*	*6 S.H.*
		Total for Degree	***36 S.H.***

Additional Requirements for Students Who Do Not Have Provisional Certification with Advanced Standing

Students in the MAT programs who do not have provisional certification with advanced standing take additional course work in the first year of the program leading to that level of certification. This includes:

Undergraduate Credits			
PSY	*2230*	*Adolescent Psychology*	*3 S.H.*
Graduate Credits			
EDUC	*7016*	*Perspectives in Secondary Education*	*1 S.H.*
EDUC	*7012*	*The Modern Secondary School (Includes 75 pre-practicum hours)*	*3 S.H.*
ENGL	*8076*	*Process Writing Across the Curriculum*	*3 S.H.*
HIST	*8090*	*Practicum (150 hours)*	*6 S.H.*

To be eligible for the practicum, students must have an appropriate base in the discipline as approved by their advisor and completed all of the above courses. The practicum (student teaching) is taken in conjunction with the Advanced Methods in Teaching I course.

MAT—Mathematics

Graduate Committee
Gerald M. Higdon, PhD, Chair
Richard Bisk, PhD
Christine Cosgrove, PhD
Lucy Dechéne, PhD
Ernest Fandreyer, EdD
Barry Light, EdD
Claire McAndrew, EdD
Mark Snyder, PhD
Abdulkeni Zekeria, PhD

MAT Education Coordinator
Nancy Kelly, PhD

Program Objectives

The Master of Arts in Teaching Mathematics program is designed to provide sufficient content courses in mathematics and professional courses in education to educate students in advanced mathematics and to prepare candidates for Standard Certification at the secondary level.

Program Description

The MAT program in mathematics aims to:

- Enhance and deepen the candidate's knowledge of mathematics
- Develop the candidate's teaching skills
- Strengthen the interactive connection between field-based experience and knowledge of theory
- Provide interdisciplinary studies
- Improve the candidate's skills to:
  a. Communicate with high school students and evaluate their progress
  b. develop and evaluate curriculum
  c. continue his/her own professional development

Two tracks are available: Track A is a professional graduate track for those who desire advanced study in mathematics and/or who currently hold Standard Certification at the Secondary Level. Track B is for students with Provisional Certification*. In addition to the content core, students must complete a 21-credit clinical core of education courses designed to prepare the student for Standard Certification at the Secondary Level. Each semester various content courses will be offered. Students should check current class listing for course selection.

Admission Standards and Criteria

To apply for enrollment in either the Master of Arts or Master of Arts in Teaching Mathematics program, students must submit documents as outlined in the Graduate Admissions section as well as:

- An official transcript of a baccalaureate degree from an accredited institution, preferably with (but not limited to) a major in mathematics.
- Applicants with inadequate preparation in mathematics will be required to take undergraduate courses in mathematics prior to admission. For those pursuing certification there may be additional prerequisite courses depending upon what previous coursework in education has been completed.

Program Requirements

All students must complete a core of at least one content mathematics course in each of the following three groupings:

1. Algebra
   Number Theory
2. Analysis
   Probability
3. Geometry
   Mathematical Modeling
   Discrete Mathematics

Additionally, all students must satisfactorily pass two approved comprehensive examinations. One exam must cover two of the above three content course groupings. The other may be in education.

Students in Track A, the professional graduate track, must complete 21 semester hours of content courses in mathematics and 9 semester hours of electives.

Students in Track B, the clinical track, must complete 15 semester hours of content courses in mathematics and a 21-credit clinical core of education courses directly related to certification requirements.

Program of Study

Track A

		Content Courses in Mathematics	*21 S.H.*
		Approved Electives	*6 S.H.*
		Electives in Education	*3 S.H.*
		Total Credits	***30 S.H.***

Track B

		Content Courses in Mathematics	*15 S.H.*
Core Education Courses			
MATH	*7500*	*Advanced Methods of Teaching at the Secondary Level I*	*3 S.H.*
MATH	*7550*	*Advanced Methods of Teaching at the Secondary Level II*	*3 S.H.*
MATH	*8250*	*Curriculum and Technology*	*3 S.H.*
MATH	*8260*	*Curriculum Design and Development*	*3 S.H.*
EDUC	*8300*	*Research in Education*	*3 S.H.*
MATH	*9500*	*Internship*	*6 S.H.*
		Total Credits	***36 S.H.***

***Additional Requirements for Students Who Do Not Have Provisional Certification With Advanced Standing**

Students in the MAT programs who do not have provisional certification with advanced standing take additional course work in the first year of the program leading to that level of certification. This includes:

Undergraduate Credits			
PSY	*2230*	*Adolescent Psychology*	*3 S.H.*
Graduate Credits			
EDUC	*7016*	*Perspectives in Secondary Education*	*1 S.H.*
EDUC	*7012*	*The Modern Secondary School (Includes 75 pre-practicum hours)*	*3 S.H.*
		One additional approved professional course	*3 S.H.*

To be eligible for the practicum, students must have an appropriate base in the discipline as approved by their advisor and completed all of the above courses. The practicum (student teaching) is taken in conjunction with the Advanced Methods in Teaching I course.

MBA—Master of Business Administration

Graduate Committee
Janette Purcell, PhD, Chair
Diane Caggiano, ABD
Howard B. Cox, PhD
John McKeon, ABD
James T. Noonan, MBA
Timothy Shea, PhD
Louis J. Zivic, EdD

Program Objectives

The Master of Business Administration (MBA) degree is designed to provide students with the skills and knowledge necessary to become leaders in business and in administration. It seeks to develop decision makers with strong analytical skills who are socially responsible, sensitive to cultural diversity, and aware of the broadening world market.

Program Description

The MBA program is comprised of three course clusters, including 24 credits of a foundation level core and 30 credits from an advanced core and specialized tracks. To complete the degree students must fulfill the following:

Eight courses (24 credits) at the foundation level
The foundation courses provide essential background knowledge regarding accounting, economics, management, marketing, finance, quantitative analysis, business law, and data processing. (It is assumed that most students entering the program with an undergraduate degree in business administration will be able to waive these foundation courses. Life experience credit may be used for waiver of some of the foundation courses based on evaluation and recommendation of a faculty committee.)

Six courses (18 credits) in advanced core
In the advanced core students acquire advanced skills and knowledge regarding current business and management practice and methodology.

Three specialized tracks
The specialized tracks are in the fields of accounting, human resources management, and management. Each track includes three specialized courses and one free elective.

Admissions Standards and Criteria

Admissions criteria meet the standards of the three national accrediting agencies (AACSB and ACBSP). To enroll in the Master of Business Administration Program, a student must submit documents as outlined in the Graduate Admissions section as well as:

- The official results of the Graduate Management Admissions Test (GMAT)

In addition to the College's standard admission requirements for Master's degree programs, all applicants are expected to have:

- An undergraduate GPA not less than 2.8
- A GMAT score of not less than 400
- TOEFL scores for natives of non-English speaking countries
- A formula score of not less than 1000
  Formula = (200 X undergraduate gpa) + GMAT score

Applicants whose formula score is less than 1000 but whose record exhibits promise in other ways may be admitted. No more than 10 to 20 percent of MBA candidates are accepted under these circumstances.

Program of Study

Foundation Core Courses—Undergraduate
(applies to all tracks)

BSAD	*1700*	*Introduction to Computer Information Systems (or equiv.)*	*3 S.H.*
BSAD	*3200*	*Principles of Management*	*3 S.H.*
BSAD	*3300*	*Fundamentals of Marketing*	*3 S.H.*
BSAD	*3400*	*Basic Finance*	*3 S.H.*
BSAD	*3500*	*Business Law I*	*3 S.H.*
ECON	*1200*	*Principles of Economics, Micro*	*3 S.H.*
Foundation Core Courses—Graduate			
MGMT	*7001*	**Quantitative Methods for Business*	*3 S.H.*
MGMT	*7002*	***Accounting for Graduate Students*	*3 S.H.*
		Subtotal	*24 S.H.*

** MGMT 7001 Quantitative Methods for Business can be replaced by Math 2200 (Calculus for Business) and Math 1800 (Business Statistics). Approval done on a case-by-case basis.*
***MGMT 7002 Accounting for Graduate Students may be replaced by BSAD 2010 (Introduction to Financial Reporting) and BSAD 2020 (Introduction to Managerial Accounting) or equivalent. Approval done on a case-by-case basis.*

Advanced Core Requirements/Applications
(applies to all tracks)

MGMT	*9040*	*Organizational Behavior and Development*	*3 S.H.*
MGMT	*9060*	*Management Information Systems*	*3 S.H.*
MGMT	*9160*	*Marketing Management*	*3 S.H.*
MGMT	*9170*	*Corporate Finance*	*3 S.H.*
MGMT	*9180*	*Accounting Practices for Managers* **or**	
MGMT	*9030*	*Accounting Theory*	*3 S.H.*
		(for Accounting Track students only)	
MGMT	*9500*	*Business Policy*	*3 S.H.*
		Subtotal	*18 S.H.*

Track Electives

The specialization in Accounting, Human Resources Management, or Management includes a free elective. To satisfy the requirement, the student chooses a course from any of the MBA course offerings or, with permission of the Graduate Program Chair, a course from another graduate discipline. Selected Topics courses may be counted as directed electives only with prior approval of the Graduate Program Chair.

Accounting Track

A. Foundation Core Courses			**24 S.H.**
B. Advanced Core Courses			**18 S.H.**
C. Required Accounting Track Courses*			
MGMT	*9032*	*Advanced Financial Accounting Issues*	*3 S.H.*
MGMT	*9034*	*Selected Topics in Advanced Managerial Accounting*	*3 S.H.*
MGMT	*9036*	*Accounting Information Systems*	*3 S.H.*
		Subtotal	***9 S.H.***
D. Free Elective			**3 S.H.**
		Total for Degree	***54 S.H.***

**Note: Students electing the Accounting Track must either be graduates of approved undergraduate Accounting programs or have at least 24 undergraduate credit hours beyond Basic Accounting with the approval of the Program Director.*

Human Resources Management Track

A. Foundation Core Courses			**24 S.H.**
B. Advanced Core Courses			**18 S.H.**
C. Required Human Resources Management Track Courses			
MGMT	*9050*	*Management of Human Resources*	*3 S.H.*
MGMT	*9070*	*Legal Issues in Human Resources Management*	*3 S.H.*
MGMT	*9450*	*Selected Topics in Management (approved by chair for HR relevance)*	*3 S.H.*
		Subtotal	***9 S.H.***
D. Free Elective			**3 S.H.**
		Total for Degree	***54 S.H.***

Management Track

A. Foundation Core Courses			**24 S.H.**
B. Advanced Core Courses			**18 S.H.**
C. Required Management Track Courses			
MGMT	*9050*	*Management of Human Resources*	*3 S.H.*
MGMT	*9080*	*Management Theory and Process*	*3 S.H.*
D. Directed Elective Courses			
Choose at least one:			
MGMT	*9100*	*Business and Society*	*3 S.H.*
MGMT	*9130*	*Legal Environment of Business*	*3 S.H.*
MGMT	*9008*	*Quality Management Theory*	*3 S.H.*
MGMT	*9002*	*International Business*	*3 S.H.*
MGMT	*9020*	*Managerial Economics*	*3 S.H.*
MGMT	*9450*	*Selected Topics in Management*	*3 S.H.*
		Subtotal	***9 S.H.***
E. Free Elective			**3 S.H.**
		Total for Degree	***54 S.H.***

Master of Education Programs

MEd—Arts Education

Graduate Committee
Harry Semerjian, EdD, Chair
Marilyn McCaffrey, EdD

Program Objectives

The program of study for the Master of Education in Arts Education is designed to provide creative experiences in the arts for teachers and community workers and enables them to transfer the creative process to their professional situations.

Program Description

The curriculum for the Master of Education in Arts Education integrates the arts and the creative process in three course areas, including core courses in Arts Education and Curriculum, Distribution courses in special topics, and electives, which may include Independent Study or Field Experience.

Admissions Standards and Criteria

To apply for enrollment in the Master of Education in Arts Education program, students must submit documents as outlined in the Graduate Admissions section on as well as:

- An official transcript of a Bachelor's degree from an accredited institution preferably with (but not limited to) a major or minor in an art area such as language arts, visual arts, music, physical education or dance
- A paper outlining the student's rationale for entering the program

Program of Study

Core Courses

CRAR	*9051*	*Supervising, Directing and Leading in Arts Education I*	*3 S.H.*
CRAR	*9052*	*Supervising, Directing and Leading in Arts Education II*	*3 S.H.*
CRAR	*9060*	*Creative Arts Research*	*3 S.H.*
CRAR	*9070*	*Creative Arts Curriculum Development and Applications*	*3 S.H.*
		Subtotal	*12 S.H.*

Distribution Courses

Students choose at least one course from each of the five Special Topics Distribution Areas.

Special Topics in Integrated Arts	*3 S.H.*
Special Topics in Music	*3 S.H.*
Special Topics in Movement	*3 S.H.*
Special Topics in Language Arts/Drama	*3 S.H.*
Special Topics in Visual Arts	*3 S.H.*
Subtotal	*15 S.H.*

Additional Courses

A minimum of 6 semester hours must be fulfilled in one of the following ways:

Courses from any of the above distribution areas	
Credits transferred into the program	
Courses related to graduate areas such as counseling, English, education, management, etc.	
Independent Study	
Field Experiences in Creative Arts	
Subtotal	*6 S.H.*
Total for Degree	***33 S.H.***

See also Fine Arts Director Certificate Program.

MEd—Educational Leadership and Management

Graduate Committee

Ronald P. Colbert, EdD, Chair
Patricia N. Barbaresi, PhD
Leslie L. Bernal, EdD
George F. Bohrer, PhD
Roger Bothwell, EdD
Mike Fiorentino, EdD
Charles W. Hetzel, PhD
Kevin O'Malley, EdD
Patricia Robbins, EdD
Kristyn M. Snyer, JD
Anne Tardanico, MEd
Louis Zivic, EdD

Program Objectives

The Master of Education in Educational Leadership and Management Program (EDLM) prepares the student to meet the standards of Massachusetts Certification as either a Supervisor/Director (N-12) or School Principal (N-6, 5-9, 9-12). The program offers courses and experiences, which equip school administrators with the skills and competencies necessary for becoming an effective educational leader.

About the Program

The Educational Leadership and Management Program is housed within the Education Department's Graduate program. In a collaborative relationship, the EDLM Program promotes the general goals and beliefs of the carefully sequenced Graduate program in Early Childhood, Elementary, and Middle School Education. Within this spirit, relationships between faculty members in Education and other programs across the college have been allied.

Program Description

The program endorses the development of educators who are reflective, person-centered practitioners able to effectively construct, articulate, and apply educational theory and research. The program aims to prepare students to:

- Develop competencies in managerial skills related to political arenas, personnel, fiscal affairs, acquisition of material resources, diverse populations, and organizational change
- Strengthen, deepen, and expand the knowledge base in the field of leadership and management in order to anticipate and to solve current and future problems inherent in the educational system
- Demonstrate through course work and field-based experiences the knowledge, skills, and attitudes that are required to lead and manage an educational enterprise effectively and efficiently

The College offers preparation for two Massachusetts Certificates

Principal Certification (N-6, 5-9, 9-12)
Supervisor/Director-Art or Music

This option is for students who wish to supervise or direct Art and/or Music programs in school systems. Successful completion of the degree may be cited as justification for application for state certification as a supervisor/director.

Candidates in other content areas who wish to supervise or direct may, in consultation with their advisor, develop a plan of study designed to meet certification requirements, and upon completion of their program may apply directly with the Department of Education.

Non-Certification Candidates

Students who do not wish to pursue certification, in consultation with their advisor, plan a 36 credit program of study that meets their professional and personal goals. Courses from each of the four competency areas should be included.

Admissions Standards and Criteria

To apply for enrollment in the MEd in Educational Leadership and Management program, the student must submit documents as outlined in the Graduate Admissions section on as well as:

- An official transcript of a Bachelor's degree from an accredited institution (applicants who graduated after April 1995 should have a Bachelor's degree in Liberal Arts and Sciences and hold provisional certification with advanced standing in education.)
- An appropriate teaching certificate
- A minimum of three years of teaching experience

Program Requirements

A minimum of 36 graduate credits is required to complete the MEd program as well as to prepare for application for one of the two certificates: Principal Certification (Track A) and Supervisor/Director (Track B). A minimum of 42 credits is required for standard certification.

Both programs consist of:

- A core of tightly-focused and comprehensive courses
- A supervised practicum/internship in the form of field-based educational experience. The practicum is 150 clock hours to be completed within one year. The internship is 300 clock hours to be completed within one year.
- Thesis (EDLM 9500): A thesis topic is chosen in consultation with the student's advisor early in the last year of study, or no later than the completion of 24 semester hours of study. A student must successfully defend his/her thesis to a committee composed of the thesis advisor and a representative from the Graduate Division chosen by the Dean of Graduate and Continuing Education. **or**
- Comprehensive Exam covering the basic principles and concepts inherent in the field of educational leadership and management
- Students seeking standard certification may complete a 400 clock hour clinical experience

The candidate must notify the graduate division in writing whether they will complete a thesis or take the comprehensive exam after completion of 24 semester hours of study.

Program of Study

Core Courses required of students in both tracks

EDLM	*8000*	*Community Relations*	*3 S.H.*
EDLM	*8010*	*Human Resources and Personnel Administration*	*3 S.H.*
EDLM	*8020*	*Law for the Educator*	*3 S.H.*
EDLM	*8030*	*Public School Finance*	*3 S.H.*
EDLM	*8040*	*Curriculum Leadership and Evaluation*	*3 S.H.*
EDLM	*8050*	*Seminar: Research in Educational Leadership*	*3 S.H.*
EDLM	*91XX*	*Practicum/Internship in Leadership Management*	*6 S.H.*
		Subtotal of Core Courses	*24 S.H.*

Track A: School Principal (N-6, 5-9, 9-12)

Required Track Courses			**24 S.H.**
EDLM	*9000*	*The Principal: Organization and Administration of the Elementary, Middle and Secondary School*	*3 S.H.*
EDLM	*9010*	*Cases and Concepts in Educational Administration*	*3 S.H.*
		Subtotal	*6 S.H.*

Elective Course Offerings (Partial Listing)

Choose two electives:

EDLM	*7000*	*Computer Applications in Education*	*3 S.H.*
EDLM	*7010*	*Physical Plants and Transportation*	*3 S.H.*
EDLM	*7020*	*Organizational Theory and Educational Planning*	*3 S.H.*
EDLM	*7030*	*Introduction to Systems Approaches in Education*	*3 S.H.*
EDLM	*7040*	*Collective Bargaining in Education*	*3 S.H.*
		Subtotal	*6 S.H.*
		Total for Degree	***36 S.H.***

Additional Clinical Experience Required for Standard Certification **6 S.H.**

Track B: Supervisor/Director-Art or Music

Required Track Courses			**15 S.H.**
CRAR	*9051*	*Supervising, Directing, and Leading in Arts Education I*	*3 S.H.*
CRAR	*9052*	*Supervising, Directing, and Leading in Arts Education II*	*3 S.H.*
CRAR	*9060*	*Creative Arts Research*	*3 S.H.*
CRAR	*9070*	*Creative Arts Curriculum Development*	*3 S.H.*

Directed Electives

Choose one of the following options:

EDLM	*9020*	*Collegial Supervision, and*	*3 S.H.*
EDLM	*9100*	*The Dynamics of Planned Change* **or**	*3 S.H.*
EDLM	*9500*	*Thesis* **and**	*3 S.H.*
EDLM	*8050*	*Seminar: Research in Educational Leadership*	*3 S.H.*
		Total for Degree	***36 S.H.***

Additional Clinical Experience Required for Standard Certification **6 S.H.**

Non-Certification Candidates

Students who do not wish to pursue certification may take the Core plus 12 semester hours of electives for a total of 36 semester hours.

MEd—Early Childhood, Elementary, or Middle School Education

Graduate Committee

Patricia Barbaresi, PhD, Chair
Ronald P. Colbert, EdD
Rona Flippo, EdD
Robert W. Greene, PhD
Charles Hetzel, PhD
George Miller, PhD
Daniel Nomishan, EdD
William Strader, EdD

Program Objectives

The MEd in Early Childhood Education, MEd in Elementary Education, and the MEd in Middle School Education programs are designed for fully certified teachers who wish to pursue advanced levels of reflection, knowledge, skill, and professionalism. The programs provide a Clinical Track for teachers who hold Provisional Certification with Advanced Standing and are pursuing Standard Certification.

Students with baccalaureate degrees and a liberal arts or science major, but without a Provisional Certification with Advanced Standing may select a 44-45 credit hour dual stage certification track. Each dual stage certification track leads to eligibility for Provisional Certification with Advanced Standing and Standard Certification at the level of the selected program, i.e. Early Childhood Education, Elementary Education or Middle School Education.

Program Descriptions

The MEd in Early Childhood Education, MEd in Elementary Education, and the MEd in Middle School Education programs of study enables educators to:

- Think about historical, philosophical, and theoretical perspectives related to current educational issues and practice
- Examine empirical research and engage in the scientific reasoning process
- Acquire and apply advanced knowledge of child development theory and research in the design and implementation of education curricula, practices, and environments
- Acquire knowledge of how children develop as thinkers and learners
- Acquire and apply advanced knowledge of emerging, research based educational principles in the planning, implementation, and evaluation of the educational environment and instructional program
- Become more aware of societal demands on the curriculum as they relate to meeting the diverse needs of students
- Investigate effective educational partnership models, which focus on family strengths, circumstances, and cultural experiences
- Demonstrate effective strategies and techniques for working with diverse populations of students in integrated learning environments
- Examine the shared values, ethics, purposes, and commitments, which bond the educational community
- Acquire a professional orientation of collegiality and support, whereby contributions can be made to the improvement of education through the construction of knowledge and applications

Admissions Standards and Criteria

To apply for enrollment in the Master of Education in Early Childhood Education, Master of Education in Elementary Education or Master of Education in Middle School Education, a student must submit documents as outlined in the Graduate Admission section as well as:

- An official transcript of a Bachelor's degree from an accredited institution (A liberal arts or science undergraduate major is required for the Clinical Tracks.)
- An appropriate teaching certificate (A provisional certificate "with advanced standing" is required for the Clinical Tracks.) Those in dual stage certification tracks are exempt from this requirement.

Program Requirements

The Master of Education in Early Childhood Education, Master of Education in Elementary Education, and Master of Education in Middle School Education require that 36 credits be acquired in a suggested sequence within six years or less. The course sequence has been designed to ensure quality and provide flexibility to serve the variety of student interests and professional needs. A program advisor assists each student with the planned sequence, and advises the selection of electives to meet individual goals and interests.

Each program is composed of:

- Five required common core courses
- Three designated specialized courses from the selected discipline of Early Childhood Education, Elementary Education, or Middle School Education
- Four elective courses or, for students in the Clinical Tracks, a Clinical Internship plus two elective courses

Students in the dual certification tracks must complete or demonstrate:

- Prerequisite undergraduate course work which must be completed before starting program courses: General Psychology and Child or Adolescent Psychology
- An additional 8-9 credits of graduate and undergraduate level course work bringing the program totals for these tracks to 44-45 credits
- 75 hours pre-practicum experiences
- 150-300 hour practicum
- Constitutional proficiency as mandated by the state prior to completion of the program

Retention in the dual stage certification tracks and admission to the practicum are dependent upon positive vote(s) by the Graduate Curriculum Committee.

Program of Study

Required Core Courses

EDUC	*7300*	*Advanced Child Development (*A)*	*3 S.H.*
EDUC	*7400*	*Contemporary Issues in Education*	*3 S.H.*
EDUC	*7500*	*Curriculum Design and Implementation for Multi-Needs Populations (*A)*	*3 S.H.*
EDUC	*8200*	*Qualitative Reading Assessment and Analysis (*C)*	*3 S.H.*
EDUC	*8300*	*Research in Education (*A)*	*3 S.H.*
		Subtotal	*15 S.H.*

Specialized courses designated within selected discipline and track

Early Childhood Education Program

EDUC	*8250*	*Family Involvement in ECE (*C)*	*3 S.H.*
EDUC	*8450*	*Literacy in Early Childhood Education (*B)*	*3 S.H.*
EDUC	*8500*	*Developmental Assessment in ECE (*C)*	*3 S.H.*

Early Childhood Education Clinical Track

EDUC	*9200*	*Clinical Internship I (*B or C)*	*+3 S.H.*
EDUC	*9201*	*Clinical Internship II (*B or C)*	*+3 S.H.*
		Subtotal	*9 or 15 S.H.*

Early Childhood Education Dual Stage Certification Track Requirements

EDUC	*3100*	*Science, Math, and Social Studies in ECE*	*4 S.H.*
EDUC	*2400*	*Fine Arts in ECE*	*4 S.H.*
EDUC	*9400*	*Practicum I/Early Childhood Education*	*3 S.H.*
EDUC	*9450*	*Practicum II/Early Childhood Education*	*3 S.H.*
		Subtotal	*9 or 15 or 29 S.H.*

Elementary Education Program

EDUC	*8400*	*Literacy in Elementary and Middle School Education (*B)*	*3 S.H.*
EDUC	*8650*	*Advanced Strategies and Application for Teaching Critical Thinking in Content Areas (*B)*	*3 S.H.*
EDUC	*8600*	*Advanced Seminar in Child-Centered Issues (*C)*	*3 S.H.*

Elementary Education Clinical Track

EDUC	*9200*	*Clinical Internship I (*B or C)*	*+3 S.H.*
EDUC	*9201*	*Clinical Internship II (*B or C)*	*+3 S.H.*
		Subtotal	*9 or 15 S.H.*

Elementary Education Dual Stage Certification Track Requirements

EDUC	*2750*	*Science in Education*	*+3 S.H.*
EDUC	*3020*	*Teaching Mathematics*	*+3 S.H.*
EDUC	*3500*	*Creative Arts in Elementary Education*	*+3 S.H.*
EDUC	*8360*	*Advanced Social Studies in Education*	*+3 S.H.*
EDUC	*9600*	*Practicum/Elementary Education*	*+3 S.H.*

Middle School Education Program

EDUC	*8150*	*Advanced Assessment, Design and Evaluation of Middle School Curriculum (*B)*	*3 S.H.*
EDUC	*8700*	*Middle School Instructional Strategies and Practices (*B)*	*3 S.H.*
EDUC	*8750*	*Seminar in Early Adolescent Issues (*C)*	*3 S.H.*

Middle School Education Clinical Track

EDUC	*9200*	*Clinical Internship I (*B or C)*	*+3 S.H.*
EDUC	*9201*	*Clinical Internship II (*B or C)*	*+3 S.H.*
		Subtotal	*9 or 15 S.H.*

Middle School Dual Stage Certification Track Requirements

EDUC	*2700*	*Science in Education*	*+3 S.H.*
EDUC	*3020*	*Teaching Mathematics*	*+3 S.H.*
EDUC	*8400*	*Literacy in Elementary and Middle School Education*	*+3 S.H.*
EDUC	*8360*	*Advanced Social Studies in Education*	*+3 S.H.*
EDUC	*9700*	*Practicum/Middle School Education*	*+3 S.H.*

Elective Courses

Students in each discipline and track (with exception of Dual Stage Certification Tracks) elect, with the recommendation of an advisor, a combination of elective credits which serve the individual's interests and complete the 36 semester hour program.

For students in the Clinical Tracks the electives will be selected to ensure that at least two courses in the total program reflect one of the curriculum areas.

Subtotal of Electives	*6 or 12 S.H.*
Total for Degree	***36 S.H.***

(*A) (*B) (*C) indicate sequence suggested to strengthen knowledge, skills, and attitudes.

MEd—Secondary Education

Graduate Committee
Ronald P. Colbert, EdD, Chair
Les Bernal, EdD
George Bohrer, PhD
Michael Fiorentino, PhD
Charles W. Hetzel, PhD
Edward Roberts, MEd

Program Objectives

The Division of Graduate and Continuing Education offers a generic Master of Education degree for teachers at the secondary level, which does not lead to certification in any area. This program provides teachers with the opportunity to update their knowledge and skills and to participate in courses specific to their professional goals.

Program Description

The MEd program addresses education reform issues and curriculum/development models to meet the needs of today's school systems. The curriculum of the 36 credit degree program is individually planned in consultation with the advisor and provides teachers with the latest effective, research-based practices and technologies to enhance classroom instruction.

MEd—Occupational Education

Graduate Committee
Lloyd Harte, EdD, Chair
Stanley Bucholc, EdD
Robert Kokernak, PhD
Edward Martens, PhD
Steven Therrien, MNS

Program Objectives

The graduate program in Occupational Education is designed for students who have earned a Baccalaureate degree in Technology Education or Vocational Education and want increased awareness and knowledge of current issues and trends in Occupational Education. The program develops an individual's professional competencies in relation to his/her career goals in education and provides advanced study of the principles and practices of educational research.

Program Description

The MEd in Occupational Education Program consists of 36 credits to be completed in a suggested sequence within six years. The course sequence has been designed to ensure quality and provide flexibility to serve the variety of student interests and professional needs. A program advisor assists each student with the planned sequence, and advises the selection electives (12 semester hours) to meet individual goals and interests.

There are three principal sites where the OCED graduate program is offered:

North
Greater Lowell Regional Vocational/Technical High School
Pawtucket Boulevard
Tyngsboro, MA 01879

Central
Assabet Valley Regional Vocational School
Fitchburg Street
Marlborough, MA 01752

South
Bristol Plymouth Regional Vocational/Technical High School
940 County Street
Taunton, MA 02780

Additional Sites
Greater New Bedford Regional Technical High School
1121 Ashley Boulevard
New Bedford, MA 02745

Blue Hills Regional Technical School
800 Randolph Street
Canton, MA 02021

Montachusett Regional Vocational/Technical High School
1050 Westminster Street
Fitchburg, MA 01420

Diman Regional Vocational/Technical High School
251 Stonehaven Road
Fall River, MA 02723

Whittier Regional Vocational/Technical High School
115 Amesbury Line Road
Haverhill, MA 01830

Admissions Standards and Criteria

To apply for enrollment in the Master of Education in Occupational Education program, a student must submit documents as outlined in the Graduate Admission section as well as:

- An appropriate teaching certificate

Program Requirements

The MEd in Occupational Education program consists of 36 credits to be completed in a suggested sequence within six years.

Total credits are divided between:

- Twenty-four semester hours of required courses
- Twelve semester hours of electives designed to allow the vocational educator to develop specific skills relative to his/her career goals

It is recommended that students take OCED 7250: Research and Statistics in Occupational Education, early in the program. All electives must be approved by the program advisor prior to enrollment in the courses.

Program of Study

Required Courses

OCED	*7000*	*History and Philosophy of Occupational Education*	*3 S.H.*
OCED	*7050*	*Seminar in Occupational Education*	*3 S.H.*
OCED	*7100*	*Supervision in Occupational Education*	*3 S.H.*
OCED	*7150*	*Evaluation in Occupational Education*	*3 S.H.*
OCED	*7200*	*Public School Laws Relating to Occupational Education*	*3 S.H.*
OCED	*7250*	*Research and Statistics in Occupational Education*	*3 S.H.*
OCED	*7300*	*Curriculum Development in Occupational Education*	*3 S.H.*
OCED	*7350*	*Public School Finance in Occupational Education*	*3 S.H.*
		Total required courses	***24 S.H.***

Elective Courses (Partial Listing)

OCED	*7400*	*Advanced Methods of Teaching in Occupational Education*	*3 S.H.*
OCED	*7410*	*Organization and Administration of Vocational Guidance*	*3 S.H.*
OCED	*7420*	*Administration of Cooperative Educational Programs*	*3 S.H.*
OCED	*7430*	*Effective Teaching of Special Needs Students in the Vocational Environment*	*3 S.H.*
OCED	*7440*	*Professional Development Workshop*	*2 S.H.*
OCED	*7450*	*Vocational Special Needs Seminar*	*3 S.H.*
OCED	*7600*	*Computer Aided Drafting I*	*3 S.H.*
OCED	*7610*	*Computer Aided Drafting II*	*3 S.H.*
OCED	*7620*	*History of Technology*	*3 S.H.*
OCED	*7630*	*Automated Manufacturing I*	*3 S.H.*
OCED	*7640*	*Automated Manufacturing II*	*3 S.H.*
OCED	*7650*	*Quality Control*	*3 S.H.*
OCED	*7660*	*Material and Process Cost Estimating*	*3 S.H.*
		Total elective credits	*12 S.H.*
		Total for Degree	***36 S.H.***

MEd—Science Education

Graduate Committee
George L. Babich, PhD, Chair
Robert Champlin, PhD
Howard Thomas, PhD

Program Objectives

The MEd in Science Education offers two tracks for students who want to advance their study of Biology and Environmental Science. Track A enhances the skills of certified teachers in Biology and Earth Science. Track B is the non-teaching track, designed to prepare the student for a career in Biology or Environmental Science.

Program Description

The **science teaching track** with a core of three courses provides a solid foundation in science and science education. The certified student's performance is closely monitored by the Graduate advisor and the Graduate faculty in Science Education.

The **non-teaching track** is designed to meet the needs of individuals pursuing specific training in Biology or Environmental Science. The student is prepared for careers in fields ranging from basic research to state environmental agencies. The student works closely with an advisor so that a flexible program is designed to provide the most current scientific information and research technology available within the program.

The student undertakes a solid investigative core based upon two research courses. This is balanced by the course "Science, Ethics, and Technology." Students may work with the advisor and the Graduate Science Curriculum Committee (GSCC) to waive certain required courses or to add supplemental courses provided at other institutions. (Students seeking certification at the secondary level in Biology or Earth Science should apply to the MAT degree programs.)

Admissions Standards and Criteria

To apply for enrollment in the Master of Education in Science Education program, the student must submit documents as outlined in the Graduate Admission section as well as:

- An appropriate teaching certificate (for science teaching track)
- An official transcript of a Bachelor's degree from an accredited institution with a major or minor in biology, earth science, or related field
- The official results of the GRE (Graduate Record Examination)

Program of Study

Track A—Science Education

Required Courses

SCED	*9000*	*Methods in Teaching Biology and Earth Science*	*3 S.H.*
SCED	*9001*	*The Modern Science Curriculum*	*3 S.H.*
SCED	*9002*	*Research in Science Education*	*3 S.H.*
		Subtotal Required Credits	*9 S.H.*

Electives

SCED	*8001*	*Independent Study*	
SCED	*8002*	*Internship*	
SCED	*8003*	*Practicum in Science*	
		Workshops	
		Science Content Courses	
		Science Teaching Courses	
		Related Education Courses	
		Approved Transfer Courses	
		Subtotal Required Electives	*27 S.H.*
		Total for Degree	***36 S.H.***

Track B—Science (Non-teaching)

Required Courses

SCED	*8001*	*Independent Study*	*3 S.H.*
SCED	*9003*	*Science, Ethics and Technology*	*3 S.H.*
SCED	*9004*	*Research in Science*	*3 S.H.*
		Subtotal Required Courses	*9 S.H.*

Electives

SCED	*8002*	*Internship*	
		Workshops	
		Science Content Cluster	
		Approved Related Courses	
		Approved Transfer Courses	
		Thesis	
		Total Required Electives	*27 S.H.*
		Total for Degree	***36 S.H.***

MEd—Special Education

Graduate Committee

Anne Howard, PhD, Co-Chair
Elaine Francis, EdD, Co-Chair
Anne May, EdD
Shari Stokes, EdD

Program Objectives

The MEd in Special Education program is designed to prepare students for careers in teaching children with special needs. The degree offers students preparation in two programs:

- Teacher of Students with Special Needs (formerly Teacher of Children with Moderate Special Needs)
- Teacher of Students with Intensive Special Needs (formerly Teacher of Children with Severe Special Needs)

Program Description

Students must select their plan of study from one of the two programs listed above. Both prepare graduates to:

- Demonstrate knowledge of the field of special education, including legislation and litigation that has affected the rights of individuals with special needs
- Demonstrate competence in teaching that leads to success for all children in the least restrictive environment
- Evaluate children to determine their educational needs and to design appropriate programs
- Collaborate with teachers and parents to develop effective teaching strategies that will enhance children's learning
- Demonstrate sensitivity, understanding and respect for children and adults from diverse cultural, religious, ethnic, and racial backgrounds

Admissions Standards and Criteria

To apply for enrollment in the Master of Education in Special Education program a student must submit documents as outlined in the Graduate Admission section.

MEd—Special Education: Clinical Program Objectives

The Clinical Master's program leads to teaching certification offered by the Commonwealth of Massachusetts. In October of 1994, the Massachusetts Department of Education implemented a two-stage process for the teacher certification process. Students gain provisional certification, typically at the undergraduate level, and full certification at the graduate level. Provisional certification can also be obtained by completing prerequisite courses and the first year of the Clinical Master's Program.

PROFILE

Christine Feen

Graduate Student

Christine Feen has an extremely full day as a graduate student in the Special Education Department. She is a graduate assistant assigned to a first grade classroom as a special education teacher in the McKay Campus School. Christine is taking advantage of the program's option to receive dual certifications in both special education and elementary education. With her pre-graduate work in psychology and social work and with the exceptional and well-rounded education she is receiving at Fitchburg State, she is confident that she will reach her goal of teaching a Behavior Disorder classroom after graduation.

Program Description

The Special Education Department has developed an innovative Clinical Master's Program, which integrates theoretical competency with practical application. Students complete course work over a four-semester (two-year) period while concurrently completing field-based requirements. Course content is organized under four strands: Assessment, Curriculum, Strategies and Collaboration. Each semester the course content builds upon the work of previous semesters in the four strands noted above.

Two programs of study are available:

Teacher of Students with Special Needs

Students may choose to work at grade levels Pre-K through 9, or 5-12. Students who complete this program may also receive certification as Elementary Teachers (grades 1-6) with an additional practicum. This program meets on campus.

Teacher of Students with Intensive Special Needs

This program prepares graduate students to work with intensive special needs at all levels.

This program is based at the Merrimack Education Center in Chelmsford and/or The Education Cooperative in Wellesley.

Information on both Clinical Master's Programs is available through the Special Education Department 978-665-3233. Informational meetings are held at the Special Education Department office on the third Thursday of every month from 4:00–5:00 pm. Call for specific dates.

Program Requirements

Students interested in the Clinical Master's Program may be required to take prerequisite courses depending on their previous course work and/or teaching certificate(s). Prospective students should attend an informational meeting and meet with an advisor from the Special Education Department to determine prerequisite courses that need to be completed. Prerequisite courses include:

- Perspectives on Special Education (or an introductory course in Special Education)
- Language Development, Differences, and Disorders
- Modifying and Adapting Curriculum
- Pedagogy in Reading, Language Arts, Math, Science and Social Studies
- Child/Adolescent Development

In addition, students in the Teacher of Students with Special Needs program are required to take Research in Special Education prior to beginning clinical coursework.

Program of Study

Teacher of Students with Intensive Special Needs

Required Courses

SPED	*8814*	*Clinical Course Work I*	*6 S.H.*
		Foundations in Assessment, Curriculum, and Program Development; Collaboration to Support Change	
SPED	*8801**	*Fieldwork (Intensive Special Educator)* **or**	*1 S.H.*
SPED	*8861**	*Practicum (Intensive Special Educator)*	*6 S.H.*
SPED	*8824*	*Clinical Course Work II*	*6 S.H.*
		Assessment, Curriculum, Strategies, and Program Development in Functional Domains; Collaboration for Family and Advocacy	
SPED	*8834*	*Clinical Course Work III*	*6 S.H.*
		Assessment, Curriculum, and Strategies re: Language, Physical and Medical Issues and Collaboration for the Educational Team	
SPED	*8862*	*Clinical Experience (Intensive Special Educator)*	*6 S.H.*
SPED	*8844*	*Clinical Course Work IV*	*6 S.H.*
		Assessment, Curriculum Strategies for the Content Areas; Transition from School to Work; Collaboration for Inclusion and Ethical Issues	
SPED	*9000*	*Research in Special Education*	*3 S.H.*
		Electives	*6 S.H.*
		Total for Degree	***40 or 45 S.H.***

Teacher of Students with Special Needs

Required Courses

SPED	*8914*	*Clinical Course Work I: Assessment, Curriculum, Strategies in Language Arts*	*6 S.H.*
SPED	*8901**	*Fieldwork Credit (Special Educator)* **or**	*1 S.H.*
SPED	*8961**	*Practicum (Special Educator)*	*6 S.H.*
SPED	*8924*	*Clinical Course Work II: Assessment, Curriculum, and Strategies for Math/Science*	*6 S.H.*
SPED	*8934*	*Clinical Course Work III: Assessment in Cognition/ Achievement/Transition Curriculum for Social Skills and Affective Development: Strategies for Behavior Management and Transition; Collaboration Skills for Inclusion/Transition*	*6 S.H.*
SPED	*8962*	*Clinical Experience (Special Educator)*	*6 S.H.*
SPED	*8944*	*Clinical Course Work IV*	*6 S.H.*
		Legal and Ethical Issues in Assessment: Curriculum Theory and Development; Transition; Collaboration with Families; The Educational Team	
SPED	*9000*	*Research in Special Education*	*3 S.H.*
		Electives	*6 S.H.*
		Total for Degree	***40 or 45 S.H.***

** In year one, students enrolled in the Clinical Master's Program who already hold Standard Certification in any area, or Provisional with Advanced Standing in Special Education take the one semester hour fieldwork credit, all others take the practicum.*

MEd—Special Education
Guided Study Program Objectives

The Guided Study program in Special Education was developed to meet the needs of teachers who already hold Special Education certification, and who are interested in further development of their professional skills.

Program Description

All students are required to take three courses that address current issues in Special Education, collaborative skills, and research appropriate for the master's degree: *SPED 9000 Research in Special Education, SPED 9280 Consultation and Collaboration Skills,* and *SPED 9400 Current Issues in Special Education.* Students work with an advisor to identify and receive approval for three goal areas that they wish to address through the curriculum offerings.

Program Requirements

Graduates must complete 39 credits for the Guided Study Program. All students complete an internship as part of their plan of study. The internship is designed to allow students to demonstrate acquired skills in an educational setting. Internship plans are developed with the advisors and are submitted to the Special Education Graduate Curriculum Committee for approval.

MEd—Technology Education

Graduate Committee
Stanley Bucholc, EdD, Chair
Lloyd Harte, EdD
Robert Kokernak, PhD
Edward Martens, PhD
Steven Therrien, MNS

Program Objectives

The Master's of Education in Technology (Industrial Arts) Education program leads to standard certification (K-9) (5-12) in the field of technology education.

Program Description

The Master's in Technology Education is a 39-credit program designed to fill the requirements for certification as a Technology teacher and to meet the needs of the practicing teacher with prior preparation and experience. In addition, the program aims to:

- Demonstrate the application of a wide range of knowledge in the area of technology education, including the technologies of manufacturing, communications, construction, power, energy, and transportation
- Prepare teachers to design, implement, and evaluate the most contemporary teaching strategies and approaches in technology education
- Enable teachers to acquire skills in developing and working with tools, machines, and materials
- Explore relationships among technology education, career awareness, math, science, and other fields of knowledge
- Implement unique problem-oriented strategies for diverse and exceptional student populations

Admissions Standards and Criteria

To apply for enrollment in the Master of Education in Technology Education program, a student must submit documents as outlined in the Graduate Admission section as well as:

- An official transcript of a Bachelor's degree from an accredited institution (A liberal arts or science undergraduate major is required for those seeking full certification)
- An appropriate teaching certificate (A Provisional Certificate with Advanced Standing is required for those seeking Standard Certification)

Program Requirements

The 39-credit program includes:

- Twelve credits of graduate pedagogy
- Fifteen credits of technology knowledge and field applications
- Six credits of professional electives
- Six credits of clinical experience

Program of Study

A. Graduate Pedagogy			
ITEC	*7500*	*Advanced Methods of Teaching at the Secondary Level I*	*3 S.H.*
ITEC	*7550*	*Advanced Methods of Teaching at the Secondary Level II*	*3 S.H.*
EDUC	*8300*	*Research in Education*	*3 S.H.*
ITEC	*8900*	*Curriculum Development for Technology Education*	*3 S.H.*
		Subtotal of Graduate Pedagogy	*12 S.H.*
B. Competence and Field Applications (in the following cluster areas)			
ITEC	*8400*	*Communications in Technology Education*	*3 S.H.*
ITEC	*8500*	*Power and Energy in Technology Education*	*3 S.H.*
ITEC	*8600*	*Manufacturing in Technology Education*	*3 S.H.*
ITEC	*8700*	*Construction in Technology Education*	*3 S.H.*
ITEC	*8800*	*Transportation in Technology Education*	*3 S.H.*
		Subtotal of Competence and Field Applications	*15 S.H.*
C. Clinical Experience			
ITEC	*9500*	*Internship*	*6 S.H.*
D. Professional Electives			**6 S.H.**
		Choose from any industrial technology course.	
		Total for Degree	***39 S.H.***

Master of Science Programs

MS—Communications/Media

Graduate Committee
Elena R. Kyle, EdD, Chair
George F. Bohrer, Jr., PhD
Lee DeNike, PhD
Ann Mrvica, PhD
David Ryder, EdD
Charles H. Sides, PhD

Program Objectives

The Master of Science in Communications/Media Management Degree Programs develops in candidates the knowledge and skills for the effective implementation of communication within business, industry, government, not-for-profit agencies, health services and education. Students may choose concentrations in:

- Communications/Media Management
- Technical and Professional Writing
- Industrial Technology (offered at Rollins Griffith Teacher Center, Dorchester)
- Library Media (offered at Rollins Griffith Teacher Center, Dorchester)

Program Description

Courses are designed to prepare students to effectively function as an organizational, financial and strategic leader of a technological communications/media organization.

- Courses are conveniently offered in the late afternoon and evening to accommodate real life-work schedules
- Distance learning opportunities are available for some courses
- The faculty includes experienced communications/media practitioners

Admissions Standards and Criteria

To apply for enrollment in the Master of Science in Communications/Media program, a student must submit documents as outlined in the Graduate Admission section as well as:

- An official transcript of a Bachelor's degree from an accredited institution in communications/media or a related field, such as educational technology
- Two or more years of experience in communications/media production
- A departmental interview and portfolio presentation

Program Requirements

The Master of Science Degree in Communications/Media requires a total of 36 semester credit hours as follows:

- Twelve credit hours required course work in Communications/Media
- Eighteen credit hours as electives from Communications/Media and other departmental offerings at FSC and/or through Rollins Griffith Teacher Center
- Six credit hours as either a practicum or thesis

Program of Study

Required Core Courses for all tracks

COMM	*9010*	*Communications Technology Forecasting*	*3 S.H.*
COMM	*9120*	*Legal and Ethical Issues in Communication*	*3 S.H.*
COMM	*9140*	*Managing Communication*	*3 S.H.*
COMM	*9110*	*Communications Research Methods*	*3 S.H.*
COMM	*9200*	*Practicum* **or**	*6 S.H.*
COMM	*9980*	*Thesis*	*6 S.H.*

Communications/Media Management Track*

Objectives

The Communications/Media Management Track is designed to provide knowledge and skills for the effective development and management of communications/media operations within the business, industry, government, health services, and education.

Description

Courses in the Communications/Media Management Program are structured to complement and extend the participant's professional skills and experiential base. Faculty collaborate with professionals working in the field, both for organizations and as independent producers, to prepare students to function as organizational, financial, technological, and strategic leaders of communications/media organizations. Specifically, students learn the importance of:

- Developing leadership skills
- Controlling budgets
- Understanding accounting
- Building a base of support
- Bringing in new technologies
- Understanding a company's products and services

Note: This program utilizes a cohort model and will commence when sufficient enrollment is secured.

Elective Course Offerings, partial listing

COMM	*9020*	*Media Communications Facilities Design*	*3 S.H.*
COMM	*9030*	*Instructional Design and Analysis in Communications/Media*	*3 S.H.*
COMM	*9130*	*Effective Leadership and the Media Manager*	*3 S.H.*
COMM	*9090*	*Interactive Multimedia*	*3 S.H.*
COMM	*9071*	*Managing the Documentation Lifecycle, Part 1*	*3 S.H.*
COMM	*9080*	*Managing the Documentation Lifecycle, Part 2*	*3 S.H.*
		Total for Degree	***36 S.H.***

GRADUATE DIVISION

*Technical and Professional Writing Track**

Objectives

The Master of Science in Communications/Media technical and Professional Writing Degree Program is designed to provide knowledge and skills necessary to develop print and online communications materials within business, industry, government, and journalistic enterprises.

Description

Courses in the Communications/Media Technical and Professional Writing Program are structured to complement and extend the participant's professional skills and experiential base. Faculty collaborate with professional writers, editors, documentation managers, and multimedia designers to prepare and mentor students in developing their communications materials for publication and distribution.

Specifically, students learn the importance of:

- Forecasting communication technology needs
- Researching for publication
- Designing and developing online and multimedia materials
- Designing and developing text-based documentation
- Editing manuscripts for publication
- Managing communications development

Note: This program utilizes a cohort model and will commence when sufficient enrollment is secured.

Technical and Professional Writing Track Offerings:
(partial listing)

COMM	*7000*	*Writing Workshop 1*	*3 S.H.*
COMM	*7500*	*Writing Workshop 2*	*3 S.H.*
COMM	*8300*	*Writing Workshop 3*	*3 S.H.*
COMM	*8400*	*Writing Workshop 4*	*3 S.H.*
COMM	*8500*	*Philosophical Issues in Professional Writing*	*3 S.H.*
COMM	*9090*	*Interactive Multimedia*	*3 S.H.*
		Total for Degree	***36 S.H.***

Instructional Technology Track (offered at Rollins Griffith Teacher Center, Dorchester)

Objectives

The objective of the Master's Degree in Communications Media/ Instructional Technology is to equip teachers and interested professionals with the knowledge and skills necessary for the effective development and management of technology in school settings.

This program is designed to:

- Update teacher's technological skills with innovative curricula and courses that will bring them into the twenty-first century
- Build on teacher's curriculum-based knowledge and equip them with skills for presenting information to students in new, innovative and creative methodologies
- Enable teachers to incorporate technology comfortably into their classroom curricula
- Assist teachers and other professionals in meeting the requirements for certification as a Unified Media Specialist

Instructional Technology Track Elective Offerings:
(partial listing)

COMM	*6250*	*Advanced Graphics for Instructional Design*	*3 S.H.*
COMM	*7020*	*Portable Video Production*	*3 S.H.*
COMM	*7030*	*Graphics for Designing Media*	*3 S.H.*
COMM	*7100*	*Television Studio Production 1*	*3 S.H.*
COMM	*7100*	*Television Studio Production 2*	*3 S.H.*
COMM	*7200*	*Communication and Visual Theory*	*3 S.H.*
COMM	*7250*	*Photography in Education*	*3 S.H.*
COMM	*7253*	*Hyper Text Mark Up Language*	*3 S.H.*
COMM	*8010*	*Organization of Learning Resources*	*3 S.H.*
COMM	*8050*	*Advanced Photography in Education*	*3 S.H.*
COMM	*8100*	*Color Photography in Education*	*3 S.H.*
COMM	*8600*	*Selection and Evaluation of Instructional Materials*	*3 S.H.*
COMM	*9030*	*Instructional Design and Analysis in Comm/Media*	*3 S.H.*
COMM	*9090*	*Interactive Multimedia*	*3 S.H.*
COMM	*9975*	*Clinical Experience*	*3 S.H.*
		Total for Degree	***36 S.H.***

Library Media Track (offered at Rollins Griffith Teacher Center, Dorchester)

Objective

The objective of the Library/Media track of the Master's Degree in Communications Media/Instructional Technology is to equip teachers with training in library and information science, and multimedia technology. Degree recipients will have the skills necessary to operate highly effective library/media programs in schools and colleges, and will be eligible for state certification as a School Library Media Specialist.

Library Media Track Elective Offerings:
(partial listing)

COMM	*7253*	*Hyper Text Mark Up Language*	*3 S.H.*
COMM	*8000*	*Administration of School/Library Media Centers*	*3 S.H.*
COMM	*8010*	*Organization of Learning Resources*	*3 S.H.*
COMM	*8030*	*Technology, Media Centers, and Libraries*	*3 S.H.*
COMM	*8250*	*Advanced Studies in Children's and Young Adult's Literature*	*3 S.H.*
COMM	*8600*	*Selection and Evaluation of Instructional Materials*	*3 S.H.*
COMM	*9030*	*Instructional Design and Analysis in Comm/Media*	*3 S.H.*
COMM	*9090*	*Interactive Multimedia*	*3 S.H.*
COMM	*9975*	*Clinical Experience*	*3 S.H.*
		Total for Degree	***36 S.H.***

Certificate Options

Certificate of Achievement

As an alternative to the full Master's Degree, students completing the Required Core of Courses and additional courses totaling 18 credit hours required coursework in Communications/Media Management with a cumulative average of 3.0 or better may be awarded a Certificate of Achievement.

MS—Computer Science

Graduate Committee
Robert McGuire, PhD, Chair
Steven Frechette, MS
William Gauvin, MS
Peter Lucchesi, MS
Aparna Mahadev PhD
Warren Tuskula, MS
James Weaver, MS

Program Objectives

The goal of the Master's degree program in computer science is to equip graduates with competitive skills and knowledge to succeed as computer scientists in the constantly developing high-technology marketplace.

About the Department

In 1972, Fitchburg State College was the first state college in Massachusetts to pioneer a Bachelor of Science degree in computer science. The master's degree program was subsequently introduced in 1981.

By 1986 Fitchburg State achieved another first among state colleges in Massachusetts by installing a campus-wide fiber optic-based network. Today, every college building is conveniently connected to a local area network (LAN). Students enjoy the benefits of communicating across campus using the fiber optic-based network and Ethernet as well as across the world via the campus wide access to the Internet.

Program Description

The Master's degree program in computer science is designed for students with the desire to:

- Upgrade and enhance their existing knowledge and skills
- Be on the forefront of emerging technological fields
- Prepare for advanced professional positions
- Initiate new career paths

The master's program specializes in software and hardware engineering, state-of-the-art knowledge, and applied science. Degree candidates study object-oriented systems development, graphics, networking, and other subjects that will enable them to develop marketable technical solutions for the quickly developing information-based society.

Concentrations are designed for computer science graduates, as well as for students and professionals from other disciplines. The college provides flexible programming for the advantage of students who are committed to broadening their education, earning advanced degrees, and improving their careers.

Students with a background in science and technology, whose goals include careers in high technology, should pursue the traditional master's degree program, which emphasizes both hardware and software.

Professionals with limited technical training but a desire to increase their knowledge of specific areas, such as networking and management, should consider the advanced degree program in computer applications software.

Candidates select their course of study based on their knowledge, skills, and experience. A close collaboration between students and the department's graduate advisor as well as other faculty members ensures that individual goals meet with department standards.

"The Fitchburg Computer Science curriculum is unique in providing a strong core which includes a balance of software and hardware and builds on the strengths of the current faculty. At the advanced level the range of elective courses would provide most students with a breadth of preparation which would rival many better known programs."

—Final Report of the Statewide Review of Computer Science Programs, 1988.

Admissions Standards and Criteria

To apply for enrollment in the Master's degree program in computer science, students must submit documents as outlined in the Graduate Admission section as well as:

- An official transcript of a bachelor's degree in computer science, mathematics, or other appropriate area of study

Computer Resources

Fitchburg State College maintains a wide range of computer systems and current supporting software.

Hardware Platforms include a DEC Alpha, a CDC Cyber 810, and eleven SUN SPARC workstations; a micro-VAX system; and a heterogeneous personal computer network developed by the college. This PC network accesses servers running a variety of operating systems including Windows 95, Windows NT, and UNIX.

Special purposes systems are available for networking, graphics, and other applications.

Programming languages include Assembly, BASIC, C, C++, COBOL, LISP, PASCAL, and PROLOG.

Computer Science students can take advantage of numerous software application packages and large databases available on networks, on optical disks, and through an extensive library of public domain software.

In addition the department's computer systems are networked to the campus Intranet, which includes fiber optics, Ethernet LANs, and a gateway to the Internet.

Program of Study

The college offers fundamental and advanced courses in algorithms, graphics, software development, database development, expert systems, simulations and data communications, and networking. Classes are also available in a variety of computer applications, including modular and object oriented programming.

I. Prerequisite Requirements (Undergraduate)

CSC	*1500*	*Computer Science I*	*3 S.H.*
CSC	*1550*	*Computer Science II*	*3 S.H.*
CSC	*1600*	*Introduction to Electronics*	*4 S.H.*
CSC	*1650*	*Digital Electronics*	*4 S.H.*
CSC	*2500*	*Assembly Language Programming*	*3 S.H.*
CSC	*2560*	*Systems Programming*	*3 S.H.*
CSC	*2600*	*Computer Organization*	*4 S.H.*
CSC	*3100*	*Operating Systems*	*3 S.H.*
CSC	*3600*	*Microprocessors*	*4 S.H.*
CSC	*3700*	*Algorithms and Data Structures*	*3 S.H.*
		Lab/Science	*6 S.H.*
		Mathematics	*12 S.H.*
		Total Prerequisite Courses	***52 S.H.***

GRADUATE DIVISION

II. Graduate Requirements

A. Core Courses (3 or 9 semester hours required)

CSC	*7010*	*Operating Systems Concepts*	*3 S.H.*
CSC	*7100*	*Design and Analysis of Algorithms*	*3 S.H.*
CSC	*7160*	*Software Development in Computer Graphics*	*3 S.H.*
		Subtotal Required Courses	*9 S.H.*

B. Elective Courses

(18 semester hours selected from any elective courses*)

CSC	*7000*	*Programming under UNIX in "C"*	*3 S.H.*
CSC	*7130*	*Simulation Methods I*	*3 S.H.*
CSC	*7140*	*Structured Systems Programming I*	*3 S.H.*
CSC	*7220*	*Structured Design*	*3 S.H.*
CSC	*7250*	*Higher Order Languages*	*3 S.H.*
CSC	*7500*	*Database Design*	*3 S.H.*
CSC	*7510*	*Microprocessor Systems*	*4 S.H.*
CSC	*8000*	*Advanced Systems Programming: UNIX & CII*	*3 S.H.*
CSC	*8010*	*Advanced Operating Systems*	*3 S.H.*
CSC	*8020*	*Data Communications and Networking*	*3 S.H.*
CSC	*8030*	*Systems Reliability*	*3 S.H.*
CSC	*8100*	*Object Oriented Programming in C++*	*3 S.H.*
CSC	*8110*	*Graph Algorithms*	*3 S.H.*
CSC	*8120*	*Local Area Networks*	*3 S.H.*
CSC	*8150*	*Expert Systems*	*3 S.H.*
CSC	*8160*	*Computer Graphics II*	*3 S.H.*
CSC	*8180*	*Windows Programming Using MFC*	*3 S.H.*
CSC	*8190*	*UNIX Network Programming*	*3 S.H.*
CSC	*8230*	*Software Tools Under UNIX*	*3 S.H.*
CSC	*8240*	*Compiler Design and Construction*	*3 S.H.*
CSC	*8250*	*Artificial Intelligence*	*3 S.H.*
CSC	*8300*	*Introduction to Ada*	*3 S.H.*
CSC	*8610*	*Measurement and Control*	*3 S.H.*
CSC	*8901*	*Internship***	*1 S.H.*
CSC	*8902*	*Internship***	*2 S.H.*
		Subtotal Elective Courses	*18 S.H.*

C. Master's Thesis or Independent Project **6 S.H.**

Total for Degree ***33 S.H.***

**Elective courses constantly change as new areas of study develop in this very dynamic field.*

***COOP Program-All students have the opportunity to amplify their classroom training with practical work experience. This is highly recommended for all full time students, students not currently employed in the computer industry, and foreign students not familiar with U.S. work protocols. To participate in this program, a student must be a fully matriculated graduate student with 9 months participation in this program and be in good academic standing. To activate, the student must register under independent study. International students may be eligible for curricular practical training (note Practical Training regulations for F-1 Visa Holder).*

MS—Counseling

Graduate Committee

Richard J. Spencer, PhD; Chair, Marriage and Family Counseling Mental Health, Counseling and School Adjustment Counseling
Carol Globiana, EdD; Chair, School Guidance Counseling
G. Jefferson Breen, EdD
John M. Hancock, PhD
Cynthia Crosson-Tower, MSW, EdD
School Guidance Counseling
Graduate Student Representative

Program Objectives

The MS in Counseling program is designed to prepare professional counselors as human development teachers or facilitators whose primary function is to help individuals enhance life adjustment, facilitate personal growth, and expand behavioral competencies so that they can cope more effectively with their environment. Through the program students increase their self-awareness, their sensitivity to others, and their effectiveness as facilitators as they develop skills in counseling.

Program Description

The program is based on a developmental socialization model of intervention, which recognizes that at each developmental stage—infancy, childhood, adolescence, young adulthood, the middle years, and old age individuals face tasks that can lead to problems needing professional assistance. Counselor education is based on the belief that effective counselors are both personally and professionally integrated. For this reason a balance between didactic and experiential learning is maintained.

Descriptions of the available programs of study follow. These programs may be pursued alone or in conjunction with a certificate program. All courses must be approved by an advisor from the Graduate Counseling Program prior to registration.

Programs of Study

Marriage and Family Therapy

Prepares professionals in family systems therapy. Students are introduced to and integrated with a variety of family therapy theories, including systematic, structural, strategic, and reflecting a team approach. Course work provides the student with:

- Didactic study of theory
- Practical applications of techniques
- Personal growth as a therapist
- Development of a personal model of family therapy

This program of study offers students the opportunity to apply for a license as Marriage and Family therapists. Courses are taught both at Fitchburg State College and at the LUK Family Institute (LUK, Inc.), which offers specialized training and supervision in family systems therapy with emphasis on families with adolescents.

Mental Health Counseling

Prepares professionals for counseling positions in a wide variety of settings. Mental Health Counseling involves the application of the principles of psychotherapy, human development, learning theory, group dynamics, and the etiology of mental illness and dysfunctional behavior. The applications are relevant to individuals, couples, families, and groups for the purpose of treating psychopathology and promoting optimal mental health.

Students take a core of required courses emphasizing generic skills. Additional course work may be directed toward:

- areas of interest such as family counseling, substance abuse, child abuse and neglect, forensic case work, etc., or
- client groups, such as children, adolescents, adults, etc.

This program of study offers students the opportunity to apply for licensure as mental health counselors.

School Adjustment Counseling

Prepares professionals in school adjustment counseling at both the elementary and the secondary school levels (N-12). Course work centers on preparation to work with children in a school environment with severe emotional, cognitive, and behavioral disorders.

Candidates learn:

- About school organization and operations
- Diagnostic skills, individual and group counseling skills, consultation skills, teamwork skills, and communication skills
- Effective use of community resources related to the welfare and education of children

This program of study offers students the opportunity to apply for Provisional Certification with Advanced Standing as a school adjustment counselor.

School Guidance Counseling

Prepares professionals for counseling at either the elementary (N-9) or secondary (5-12) school levels. Course work centers on preparation to work with children in a school environment with serious emotional, cognitive, and behavioral disorders. In addition, graduates are educated in methods to work effectively with teachers, parents, administrators, nurses, school psychologists, and other members of the school community to assist youngsters to obtain an appropriate education and to participate productively in society.

This program of study offers students the opportunity to apply for Provisional Certification with Advanced Standing as an elementary school and/or secondary school guidance counselor.

Certificate Programs of Study

Adolescent and Family Therapy Certificate

Provides specialized training in family systems therapy. Instruction emphasizes the relationship between the student's own experience with her/his family and clinical work with client families. Students are taught to understand and work with families from a variety of family therapy theories, including systematic, structural, strategic and structural-analytic. In addition, students are taught skills to begin building their own model of family therapy from current models as well as from their personal perspective of being a therapist.

Courses are taught at LUK Family Institute (LUK, Inc.), an adolescent and family counseling agency in Fitchburg, MA, which offers a full range of clinical services.

Child Protective Services Certificate

Provides professionals with specialized training in skills specific to working with:

- Victims of child abuse and neglect
- Abusers
- Families of both the abuser and abused

The certificate in Child Protective Services requires a minimum of two years of study involving a sequence of courses, beginning with the theoretical and finishing with practical applications and a field component.

Forensic Case Work Certificate

Provides training for entry level workers or experienced workers in skills specific to working with and understanding:

- Offender and offenses
- The designated systems that treat or otherwise manage the offender
- Issues and interventions in case work
- The legal and ethical issues that confront the workers in the systems

Substance Abuse Services Certificate

Provides training in skills specific to working with substance abusers, including those with dual diagnoses, and the families of substance abusers. Course work typically spans two years; however, students may elect to extend that time frame or complete the required course work in less time.

Special Status Student

This program of study is designed for professionals who already hold a Master's degree in Counseling or a related field. The program prepares graduates for the opportunity to apply for:

- Licensure as a Marriage and Family Therapist
- Licensure as a Mental Health Counselor
- Certification as a School Adjustment Counselor or
- Certification as a School Guidance Counselor

A second Master's degree is not awarded through this program of study. Students apply for enrollment through the CAGS in Interdisciplinary Studies Program.

Admissions Standards and Criteria

To apply for enrollment in the MS in Counseling Program, a student must submit documents as outlined in the Graduate Admission section as well as:

- A personal statement (maximum 300 words) describing goals and reasons for applying to the program

Students are admitted to Phase I of the program.

Candidacy is awarded by the Behavioral Sciences Committee on Graduate Programs based on:

- The successful completion of the undergraduate prerequisites
- The successful completion of the experiential and theoretical aspects of counseling (Phase I course work)
- The demonstration of competent personal and appropriate ethical behavior
- The demonstration of competent interpersonal skills

Program Requirements

For all programs, students together with their advisors, must plan a program to meet the candidate's career goals. All courses must have advisor approval prior to registration.

I. Undergraduate Prerequisites			***12 S.H.**
		General Psychology	*3 S.H.*
		Developmental Psychology	*3 S.H.*
		Abnormal Psychology	*3 S.H.*
		Applied Statistics for Counselors	*3 S.H.*

** Undergraduate credits are not figured into degree requirements for Graduate Study.*

II. Graduate Requirements

Marriage and Family Therapy

A minimum of 60 semester hours in required. Students must take:

- Fifty-seven semester hours of required courses including; 12 semester hours of Internship
- Three semester hours of electives

Phase I			
PSY	*7010*	*Counseling Theories and Techniques*	*3 S.H.*
PSY	*7020*	*Group Dynamics*	*3 S.H.*
Phase II			
PSY	*7005*	*Mental Health and Family Counseling: Professional Practice, Standards and Ethics*	*3 S.H.*
PSY	*8010*	*Issues in Development: Counseling Children and Adolescents*	*3 S.H.*
PSY	*8020*	*Issues in Development: Counseling Adults*	*3 S.H.*
PSY	*8130*	*Psychopathology I: Diagnosis and Assessment*	*3 S.H.*
PSY	*8190*	*Social and Cultural Foundations: Issues and Diversity*	*3 S.H.*
PSY	*8300*	*Psychological Testing and Assessment: Theory and Practice*	*3 S.H.*
PSY	*8500*	*Counseling Techniques and Case Analysis: Individuals and Families*	*6 S.H.*
PSY	*8750*	*Family Models, Organization and Process I*	*3 S.H.*
PSY	*8755*	*Family Models, Organization and Process II*	*3 S.H.*
PSY	*8950*	*Research and Evaluation*	*3 S.H.*
PSY	******	*Psychology Elective*	*3 S.H.*
Phase III			
PSY	*8770*	*Advanced Systemic Intervention I*	*3 S.H.*
PSY	*9087*	*Internship in Marriage and Family Therapy*	*12 S.H.*
PSY	*8780*	*Advanced Systemic Intervention II*	*3 S.H.*
		Total for Degree	***60 S.H.***

Mental Health Counseling

A minimum of 60 semester hours is required. Students must take:

- Fifty-four semester hours of required courses including 12 semester hours of Internship
- Six semester hours of electives

Phase I			
PSY	*7010*	*Counseling Theories and Techniques*	*3 S.H.*
PSY	*7020*	*Group Dynamics*	*3 S.H.*
Phase II			
PSY	*7005*	*Mental Health and Family Counseling: Professional Practice, Standards and Ethics*	*3 S.H.*
PSY	*8010*	*Issues in Development: Counseling Children and Adolescents*	*3 S.H.*
PSY	*8020*	*Issues in Development: Counseling Adults*	*3 S.H.*
PSY	*8130*	*Psychopathology I: Diagnosis and Assessment*	*3 S.H.*
PSY	*8132*	*Psychopathology II: Treatment and Outcome*	*3 S.H.*
PSY	*8190*	*Social and Cultural Foundation: Issues and Diversity*	*3 S.H.*
PSY	*8215*	*Life Style and Career Development*	*3 S.H.*
PSY	*8300*	*Psychological Testing and Assessment: Theory and Practice*	*3 S.H.*
PSY	*8500*	*Counseling Techniques and Case Analysis: Individuals and Families*	*6 S.H.*
PSY	*8700*	*Group Work and Leadership*	*3 S.H.*
PSY	*8950*	*Research and Evaluation*	*3 S.H.*
PSY	******	*Psychology Elective*	*6 S.H.*
Phase III			
PSY	*9090*	*Internship in Mental Health Counseling*	*12 S.H.*
		Total for Degree	***60 S.H.***

School Adjustment Counseling

A minimum of 60 semester hours is required. Students must take:

- Sixty semester hours of required courses, including 12 semester hours of Internship

Phase I			
PSY	*7010*	*Counseling Theories and Techniques*	*3 S.H.*
PSY	*7020*	*Group Dynamics*	*3 S.H.*
Phase II			
PSY	*7000*	*School and Adjustment Counseling: Professional Practice, Standards and Ethics*	*3 S.H.*
PSY	*8010*	*Issues in Development: Counseling Children and Adolescents*	*3 S.H.*
PSY	*8100*	*Child Abuse and Neglect and Other Individual Societal Dysfunctions*	*3 S.H.*
PSY	*8130*	*Psychopathology I: Diagnosis and Assessment*	*3 S.H.*
PSY	*8132*	*Psychopathology II: Treatment and Outcome*	*3 S.H.*
PSY	*8190*	*Social and Cultural Foundations: Issues and Diversity*	*3 S.H.*
PSY	*8230*	*Working with Individuals with Special Needs*	*3 S.H.*
PSY	*8240*	*Intervention Methods for School Adjustment Counseling (Consultation, Crisis Intervention, Conflict Resolution and Comm. Collaboration)*	*3 S.H.*
PSY	*8300*	*Psychological Testing and Assessment: Theory and Practice*	*3 S.H.*
PSY	*8500*	*Counseling Techniques and Case Analysis: Individuals and Families*	*6 S.H.*
PSY	*8700*	*Group Work and Leadership*	*3 S.H.*
PSY	*8710*	*Family and Systems, Models, and Interventions*	*3 S.H.*
PSY	*8950*	*Research and Evaluation*	*3 S.H.*

Phase III

PSY	*9092*	*Internship in School Adjustment Counseling*	*12 S.H.*
		Total for Degree	***60 S.H.***

School Guidance Counseling

A minimum of 48 semester hours is required. Students must take:

- Forty-eight semester hours of required courses, including 9 semester hours of Internship

Phase I

PSY	*7010*	*Counseling Theories and Techniques*	*3 S.H.*
PSY	*7020*	*Group Dynamics*	*3 S.H.*

Phase II

PSY	*7000*	*School and Adjustment Counseling: Professional Practice, Standards & Ethics*	*3 S.H.*
PSY	*8010*	*Issues in Development: Counseling Children and Adolescents*	*3 S.H.*
PSY	*8100*	*Child Abuse and Neglect and Other Individual Societal Dysfunctions*	*3 S.H.*
PSY	*8190*	*Social and Cultural Foundations: Issues and Diversity*	*3 S.H.*
PSY	*8200*	*Principles of Guidance and Counseling*	*3 S.H.*
PSY	*8210*	*Occupational Information and Career Counseling (For Secondary Certification, 5-12)* ***or***	
PSY	*8220*	*Counseling in the Elementary School (For Elementary Certification, Pre-K-9)*	*3 S.H.*
PSY	*8230*	*Working with Individuals with Special Needs*	*3 S.H.*
PSY	*8300*	*Psychological Testing and Assessment: Theory and Practice*	*3 S.H.*
PSY	*8500*	*Counseling Techniques and Case Analysis: Individuals and Families*	*6 S.H.*
PSY	*8950*	*Research and Evaluation*	*3 S.H.*

Phase III

PSY	*9085*	*Internship in School Counseling*	*9 S.H.*
		Total for Degree	***48 S.H.***

MS—Criminal Justice*

Graduate Committee

John Hancock, PhD, Interim Chair
Charles K. Brownlee, JD
Margot Beth Kempers, PhD
Mary King, EdD
Leonard J. Staples, JD, PhD

Program Objectives

The Criminal Justice program is designed for the criminal justice practitioner either presently employed or seeking employment in the field. Enrollment is also open to students with interest in research, theory, or pre-law.

Program Description

The degree requires 36 semester hours of course work. 24 credits are fulfilled by the Core areas and 12 are fulfilled in a specialized track.

The substantive areas of criminology, law enforcement, law adjudication, and corrections are interwoven throughout the three core areas of the curriculum. Specific attention is paid in the core areas of study to issues of diversity, ethical dilemmas, and contemporary issues. Each core provides the necessary foundation for the subsequent core area.

Another component of each student's work is the choice of track course work. Each student selects the track most appropriate to his/her professional goals. Track decisions are made in consultation with the faculty advisor.

****Note: Enrollment in this program is based on a cohort model. Contact the Office of Admissions for program start date.***

Program of Study

Goals of Core I—Foundations

The goal of the integrated first core is to explore the theoretical underpinnings of criminal justice policy and practice.

The core I phase of the program encompasses 6 credits covering:

- History and Development of Legal Systems
- Criminal Justice Process
- Social Relations and the Legal System

Goals of Core II—Applications

The goal of this integrated core is to develop a functional knowledge of the inherent complexities and day-to-day workings of the American criminal justice system. This is accomplished by focusing on law and its mechanics; etiology of criminal behavior; role of research in criminal justice work; system management; and the changing tools of the criminal justice profession.

The Core II phase comprises 12 credits consisting of:

Section I

- Law: Substantive and Procedural
- Criminology
- Administration and Organizational Development

Section II

- Research
- Group Process/Individual and Interpersonal Skills
- Contemporary Issues
- Technology
- Ethics

Goals of Core III—Capstone

The Capstone experience gives each student an opportunity to combine theory and practice, and to utilize the knowledge and skills acquired throughout the program. All students conducting the Capstone experience meet together for a bi-weekly seminar.

The Core III (Capstone) phase of six credits provides the options of either:

- Internship (300 field hours)
- Project
- Thesis

Program Requirements

Core I—Foundations (Spring)

The goal of this integrated first Core is to explore the theoretical foundations of criminal justice policy and practice.

The Core I phase of the program consists of six (6) credits that include the following subjects:

CJ	*7220*	*History and Development of Legal Systems*	*20 hrs.*
CJ	*7240*	*Criminal Justice Process*	*35 hrs.*
CJ	*7260*	*Social Relations and the Legal Systems*	*20 hrs.*

CORE II—Applications (Fall/Spring)

The goal of this integrated Core is to develop a practical knowledge of the inherent complexities and day-to-day operations of the American criminal justice system. This is accomplished by focusing on law and its mechanics; etiology of criminal behavior; the role of research in criminal justice work; system management; and ethical an d contemporary issues in the criminal justice profession.

The Core II phase consists of twelve (12) credits that include the following subjects in Section I and II:

A. Section I (Fall)

CJ	*8410*	*Criminal Law: Substantive and Procedural*	*37.5 hrs.*
CJ	*8430*	*Research Methods*	*37.5 hrs.*

B. Section II (Spring)

CJ	*8530*	*Criminology*	*37 hrs.*
CJ	*8540*	*Administrative and Organizational Development*	*20 hrs.*
CJ	*8560*	*Contemporary Issues*	*10 hrs.*
CJ	*8580*	*Ethical Issues in Criminal Justice*	*10 hrs.*

CORE III—Capstone (Fall)

The Capstone experience gives each student an opportunity to integrate theory and practice by utilizing the knowledge and skills acquired throughout the program. All students participating in the Capstone meet together every two weeks during the semester for a seminar.

To complete the Capstone experience, each student must choose **one** of the following six-credit options:

- Internship (300 filed hours)
- Project
- Thesis

Admissions Standards and Criteria

To apply for enrollment in the Master of Science in Criminal Justice program, a student must submit documents as outlined in the Graduate Admission section as well as:

- A personal statement (maximum 300 words) or a personal interview. The statement should describe the goals and reasons for applying to this program and include information about previous course work, training or work experiences related to the program.

Specialized Tracks

Each student selects a specialized track from the seven tracks listed below. All tracks are worth 12 credits.

Professional Studies Track

This is an integrated track designed to inform the student about the legal, ethical, and professional implications of situations encountered in the workplace, as well as the dilemmas which they present.

The required courses for this track are:

CJ	*9620*	*Legalities of Criminal Justice Administration*	*3 S.H.*
CJ	*9640*	*Technology and Legal Limitations*	*3 S.H.*
CJ	*9660*	*Professional Issues: Liabilities and Challenges*	*3 S.H.*
CJ	*9680*	*Cultural Diversity and Communication*	*3 S.H.*

Individualized Studies Track

This track allows the student to pursue academic and professional areas of interest on this campus as well as at other institutions. Some or all of the twelve semester hours of course work may be taken off-campus and transferred into the graduate program in criminal justice at Fitchburg State College. Prior approval of the faculty advisor is required for the development of this individual track.

Management Track

This track, designed by the Business Administration Department, is intended for the student who is particularly interested in applying management theory and practice to criminal justice administration. Prerequisites may be required.

MGMT	*9040*	*Organizational Behavior and Development*	*3 S.H.*
MGMT	*9050*	*Management of Human Resources*	*3 S.H.*
MGMT	*9080*	*Management Theory and Process*	*3 S.H.*
MGMT	*9320*	*Labor Management*	*3 S.H.*

Forensic Case Work Track

This track informs students about:

- The nature of the offender and offenses
- The systems that treat and manage the offender
- Issues and interventions in case work
- The legal and ethical issues that confront professionals in the system

Students may qualify to apply this course work toward a Certificate in Forensic Case Work Studies offered through the Graduate Program in Counseling. Prerequisites may be required.

The track courses are:

PSY	*8172*	*Criminal Psychopathology*	*3 S.H.*
PSY	*8175*	*Treatment Issues and Interventions in Forensic Case Work*	*3 S.H.*
PSY	*9174*	*Systems, Law and Issues in Forensic Case Work*	*3 S.H.*

One elective from the following courses:

PSY	*8100*	*Child Abuse and Neglect*	*3 S.H.*
PSY	*8120*	*Sexual Abuse of Children and Adolescents*	*3 S.H.*
PSY	*8140*	*Alcohol Abuse and Other Addictive Disorders*	*3 S.H.*
PSY	*8176*	*Mental Status Examination*	*3 S.H.*

Child Protection Studies Track

This track informs students about the impact of childhood abuse and neglect, and sexual abuse on those who become involved in the criminal justice system. The student will learn to recognize and treat the effects of abuse. The student also examines how her/his own experiences affect the manner in which she/he works with victims and perpetrators of abuse and neglect. Prerequisites may be required.

PSY	*8100*	*Child Abuse and Neglect, and other Individual/Societal Dysfunctions* ***or***	*3 S.H.*
PSY	*8120*	*Sexual Abuse of Children and Adolescents*	*3 S.H.*
PSY	*8150*	*Case Management Treatment of Victims*	*6 S.H.*
PSY	*8160*	*Psychology and Treatment of Offending Behavior*	*3 S.H.*

Counseling Studies Track

This track informs students about the theory and practice of counseling through experiential, group, and traditional course work. Prerequisites may be required.

PSY	*7010*	*Counseling Theories and Techniques*	*3 S.H.*
PSY	*7020*	*Group Dynamics*	*3 S.H.*
		Two electives (with advisor approval)	*6 S.H.*

Substance Abuse Services Track

This track provides training in skills specific to working with substance abusers, including those with dual diagnoses, and the families of substance abusers.

PSY	*8140*	*Alcohol Abuse and Other Addictive Disorders*	*3 S.H.*
PSY	*8142*	*Intervention and Rehabilitation Services for Substance Abusers*	*3 S.H.*
PSY	*8144*	*Case Management in Substance Abuse Services*	*3 S.H.*
		One elective (with advisor approval)	*3 S.H.*
		Total Core Credits	*24 S.H.*
		Total Track Credits	*12 S.H.*
		Total for Degree	***36 S.H.***

MS—Nursing (Specialty: Forensic Nursing)

Graduate Committee

Barbara P. Madden, RN, EdD, Chair
Barbara A Cammuso, RN, C, PhD, EdD
Mary King, EdD
Ann Scannell, RN, PhD
Andrea Wallen, RN, EdD
Community Representative
Graduate Student Representative

Program Objectives

The Master of Science in Nursing degree program is designed for registered nurses who wish to pursue advanced leadership positions in the community and the health care system. The graduate is prepared to contribute to the development of nursing science, to the improvement of health care, and to pursue doctoral study.

Program Description

Through course work and clinical experience, graduates are prepared to:

- Base advanced professional practice on the concept that humankind are unique, interacting, multidimensional beings
- Use nursing practices to guide care for a specialized client population
- Demonstrate competence in the advanced practice role
- Actively promote professional standards, ethics, and legal principles in nursing and health care
- Use a variety of strategies to influence policy-making relating to societal health needs
- Assume leadership roles with health care consumers and providers to improve the planning and delivery of health care
- Contribute to the advancement of nursing knowledge through validation and/or extension of research findings
- Integrate theories and advanced knowledge into clinical practice and professional decision-making
- Demonstrate commitment to the evolving profession of nursing

The specialty in Forensic Nursing prepares nurses to apply:

- Knowledge and skills of nursing and forensic science to the investigation of trauma concurrently with emergency care and emotional support for victims of violent crime
- The nursing process to public or legal proceedings
- Aspects of health care to the scientific investigation and treatment of trauma
- Sensitivity to the health needs and concerns of diverse populations as a clinical nurse specialist
- Direct services such as legal documentation to individual and group clients, including insurance companies and law firms
- Consultation and education for groups, related agencies, and communities
- Expert witness skills in investigations related to violence and trauma
- Skills for varied settings, including emergency health services, schools, correctional facilities, varied community health agencies, employee assistance programs in occupational health settings and law enforcement agencies

Note: This program is offered on a cohort basis, with admission in May of the even years.

Admissions Standards and Criteria

To apply for enrollment in the Master of Science in Nursing program, a student must submit documents as outlined in the Graduate Admission section as well as:

- An official transcript as a graduate of a NLN-accredited baccalaureate nursing program
- Three letters of recommendation including documenting a minimum of one year of recent successful clinical practice or part-time equivalent
- A license as a RN in Massachusetts (or indication of intent to apply for same)
- Written personal statement of career goals

Program of Study

The program is currently planned on a part-time, two-year calendar through evening, weekend, and/or summer courses. The course sequence is flexible, but is designed to:

- Complete core nursing courses with the exception of the Scholarly Inquiry requirement prior to or concurrent with any clinical specialty nursing course
- Support the clinical specialty nursing courses through prerequisite cognate courses
- Cap the program with a practicum where enrollees also apply the research component

It should be noted that nursing courses and required cognates may have prerequisite undergraduate or graduate course work.

Program Requirements

A. Core Nursing Courses

NURS	*7200*	*Nursing Theory*	*3 S.H.*
NURS	*7400*	*Contexts for Advanced Practice*	*3 S.H.*
NURS	*7500*	*Role Theory: Application to Advance Practice*	*2 S.H.*
NURS	*7000*	*Nursing With Diverse Populations*	*1 S.H.*
NURS	*7300*	**Advanced Clinical Concepts*	*2 S.H.*
Scholarly Inquiry Requirement			
NURS	*7800*	*Qualitative Nursing Research*	*2 S.H.*
NURS	*7900*	*Epidemiological and Experimental Nursing Research*	*2 S.H.*
NURS	*9000*	*Research Application*	*2 S.H.*
		Subtotal	*17 S.H.*

B. Required Cognates in the Forensic Nursing track

CHEM	*7000*	*Criminalistic: Forensic Chemistry*	*3 S.H.*
One of the following courses:			
CJ	*8410*	*Criminal Law: Substantive and Procedural*	*3 S.H.*
PSY	*8174*	*Systems, Laws and Issues in Forensic Case Work*	*3 S.H.*
		Subtotal	*6 S.H.*

C. Required Nursing Courses in the Forensic Nursing track

NURS	*8100*	*Scientific Foundations for Forensic Nursing Interventions*	*3 S.H.*
NURS	*8000*	**Introduction to Forensic Nursing*	*2 S.H.*
NURS	*8200*	*Forensic Nursing: Caring for Victims and Perpetrators I*	*3 S.H.*
NURS	*8300*	*Forensic Nursing: Caring for Victims and Perpetrators II*	*3 S.H.*
NURS	*9500*	**Practicum in Forensic Nursing*	*3 S.H.*
		Subtotal	*13 S.H*
		Total for Degree	***37 S.H.***

** These courses have a clinical component.*

Certificate Programs

Adolescent and Family Therapy Certificate

Program Objectives

This course of study offers students the opportunity to apply for licensure as marriage and family counselors. The program provides specialized training and supervision in adolescent and family therapy. This certificate is offered in affiliation with the Adolescent and Family Institute of Luk, Inc.

Program Description

A minimum of 21 semester hours over two years of study is required. Students must take a sequence of required courses including 6 semester hours of Internship. All courses taken must have advisor approval prior to registration.

Admissions Standards and Criteria

To apply for enrollment in the Adolescent and Family Therapy Certificate Program, a student must submit documents as outlined in the Graduate Admission section as well as:

- A personal statement (maximum 300 words). The statement should describe your goals and reasons for applying to this program and include information about previous course work, training or work experiences related to the program. It should also discuss specifically the strengths you bring and the areas of competencies you need to develop.
- MAT/GRE/GMAT exams not required

Program of Study

Undergraduate Prerequisite Courses

General Psychology
Abnormal Psychology
Developmental Psychology

Phase I			
PSY	*8740*	*Systems Theory*	*3 S.H.*
PSY	*8750*	*Family Models, Organizations and Process I*	*3 S.H.*
Phase II			
PSY	*8755*	*Family Models, Organizations and Process II*	*3 S.H.*
PSY	*8770*	*Advanced Systemic Intervention I*	*3 S.H.*
PSY	*8780*	*Advanced Systemic Intervention II*	*3 S.H.*
Phase III			
PSY	*9075*	**Internship in Counseling*	*6 S.H.*
		Total for Certificate	***21 S.H.***

** Internship sites are carefully selected from agencies which have extensive treatment programs in adolescent and family therapy.*

Child Protective Services Certificate

Program Objectives

Provides specialized training for professionals in skills specific to working with the victims of child abuse and neglect, with abusers and with the families of both. The certificate can be earned by itself or in conjunction with a Master of Science in Counseling degree.

Program Description

A minimum of 21 semester hours over two years is required. Students must take a sequence of required courses including 6 semester hours of Internship. Internship sites are carefully selected from agencies which have existing abuse treatment programs and experienced staff for supervision.

All courses taken must have advisor approval prior to registration.

Admissions Standards and Criteria

To apply for enrollment in the Child Protective Services Certificate Program, a student must submit documents as outlined in the Graduate Admission section as well as:

- A personal statement (maximum 300 words). The statement should describe your goals and reasons for applying to this program and include information about previous course work, training or work experiences related to the program. It should also discuss specifically the strengths you bring and the areas of competencies you need to develop.
- MAT/GRE/GMAT exams not required

Program of Study

Phase I			
PSY	*8100*	**Child Abuse and Neglect, and Other Individual/Societal Dysfunctions* ***or***	
PSY	*8120*	**Sexual Abuse of Children and Adolescents*	*3 S.H.*
PSY	*8150*	*Case Management and Treatment of Victims (two semesters: spring and summer I)*	*6 S.H.*
Phase II			
PSY	*8160*	*Psychology and Treatment of Offending Behavior*	*3 S.H.*
PSY	*8170*	*Family Treatment with Abusive/ Neglectful Families*	*3 S.H.*
Phase III			
PSY	*9070*	*Internship in Child Protection*	*6 S.H.*
		Total for Certificate	***21 S.H***

** The introductory course (Child Abuse and Neglect, and Other Individual/Societal Dysfunctions or Sexual Abuse of Children and Adolescents) is open to Child Protective Services students as well as the college and the community. After taking this course students pursuing the certificate are required to make a commitment to finish the program in order to take the remaining courses.*

** Students who can document 3,000 hours of experience working directly with child abuse and neglect may elect to take an examination to waive the introductory course.*

Communications/Media Certificate Program

Program Objectives

The Communications/Media Certificate Program is designed to provide knowledge and skills for the effective development and management of communications/media operations within business, industry, government, and health services.

Admissions Standards and Criteria

To apply for enrollment in the Communications/Media Certificate Program, a student must submit documents as outlined in the Graduate Admission section as well as:

- An official transcript of a Bachelor's degree from an accredited institution in communications/media or a related field, such as educational technology
- Two or more years of experience in communications/media production
- A departmental interview and portfolio presentation
- MAT/GRE/GMAT exams not required

Program of Study

The Communications/Media Certificate Program required courses are offered in the following paired sequence:

COMM	*9010*	*Communications Technology Forecasting*	*3 S.H.*
COMM	*9120*	*Legal and Ethical Issues in Communication*	*3 S.H.*
COMM	*9110*	*Communications Research Methods*	*3 S.H.*
COMM	*9140*	*Managing Communication*	*3 S.H.*
		Elective Coursework	*6 S.H.*
		Total for Certificate	***18 S.H.***

Certificate of Achievement

Students must complete the 18 credit hours required course work in Communications/Media.

Early Intervention Certificate Program

Program Objectives

The program has been developed to meet the Department of Public Health Certification requirements for Early Intervention Specialists. Beginning in 1998 this certification will be required for early intervention specialists.

Program Description

Early Intervention is a program sponsored by the Massachusetts Department of Public Health. Students who study early intervention learn to help parents of children with special needs from birth to age three to recognize and understand their child's particular developmental needs and teach them ways to help their child grow.

Early intervention specialists work with children from birth to three who are premature, have feeding, vision, or hearing problems; are slow to sit up, stand, walk, talk, or do things for themselves; have behavior or attention difficulties; or were born with a disability or health condition that affects their development. Also, the early intervention specialist works with the families of children who have an established biological or environmental risk for developmental delay.

As part of a team, the early intervention specialist works with the family to determine what type of developmental help would be most beneficial for the child. Together they establish an Individual Family Service Plan (IFSP) that specifies all the educational, training, therapy, and support services the family will receive to best help the child.

Admissions Standards and Criteria

To apply for enrollment in Early Intervention Certificate Program, a student must submit documents as outlined in the Graduate Admission section as well as:

- Complete Child Psychology and an introductory course in Special Needs
- MAT/GRE/GMAT exams not required

Program Requirements

This certificate program combines fifteen credits of course work and six practicum credits. The course work may be taken in any sequence. All coursework must be completed before the practicum.

Program of Study

SPED	*6600*	*Early Intervention*	*3 S.H.*
SPED	*8140*	*Screening and Assessment of at Risk Infants and Toddlers*	*3 S.H.*
SPED	*7950*	*Physical and Medical Aspects of Working with Children with Disabilities*	*3 S.H.*
SPED	*9200*	*Collaboration Skills for Teachers* **or**	
EDUC	*8250*	*Family Involvement in Early Childhood Education*	*3 S.H.*
SPED	*8900*	*Early Intervention Practicum*	*6 S.H.*
		Total for Certificate	***18 S.H.***

Educational Technology Certificate Program

Program Objectives

This program offers educators and administrators the necessary skills to utilize computer technology in the practice of teaching and program administration. This program stresses the use of the computer as both a teaching tool and as a means to examine curricula and teaching effectiveness.

Admissions Standards and Criteria

To apply for enrollment in the Educational Technology Certificate program, a student must submit documents as outlined in the Graduate Admission section.

- MAT/GRE/GMAT exams not required

Program of Study

A total of 15 semester hours of designated credits must be earned and a cumulative average of 3.0 maintained in the program to be eligible for the certificate. This program may be applied to any of the Master's degree or CAGS programs in Education.

Course Requirements

ETEC	*7600*	*Impact of Technology on Education*	*3 S.H.*
ETEC	*7700*	*A Graphics Approach to Technology*	*3 S.H.*
ETEC	*7800*	*Using the Computer as a Tool for Thinking Skills*	*3 S.H.*
ETEC	*8600*	*Computers and Writing*	*3 S.H.*
ETEC	*9200*	*Project in Educational Technology*	*3 S.H.*
		Total for Certificate	***15 S.H.***

Fine Arts Director Certificate Program

Program Objectives

The program is designed for those responsible for the supervision of fine arts programs or teachers moving into such areas of responsibility.

Admissions Standards and Criteria

To apply for enrollment in the Fine Arts Director Certificate program, a student must submit documents as outlined in the Graduate Admission section.

- MAT/GRE/GMAT exams not required

Note: Applicants should either be certified to teach in one of the arts areas or hold a position as director of an arts area in a K-12 school.

Program of Study

The Fine Arts Director Certificate Program consists of four graduate courses. Applications are invited from individuals holding a valid Teaching Certificate in one of the arts areas.

The certificate program courses may be applied toward the CAGS Program in Educational Leadership and Management or the MEd in Arts Education.

Certificate Courses

CRAR	*9051*	*Supervising, Directing and Leading in Arts Education I*	*3 S.H.*
CRAR	*9052*	*Supervising, Directing and Leading in Arts Education II*	*3 S.H.*
CRAR	*9060*	*Creative Arts Research*	*3 S.H.*
CRAR	*9070*	*Creative Arts Curriculum Development and Application*	*3 S.H.*
		Total for Certificate	***12 S.H.***

Forensic Case Work Certificate Program

Program Objectives

The Forensic Case Work Certificate Program provides specialized training to professionals in the fields of criminal justice, mental health, or social services.

Program Description

Course work concentrates on:

- The nature of the offender and offense
- The designated systems that treat or otherwise manage the offender
- Issues and interventions in case work
- The legal and ethical issues that confront the workers in the systems

Admissions Standards and Criteria

To apply for enrollment in the Forensic Case Work Certificate program, a student must submit documents as outlined in the Graduate Admissions section as well as:

- An official transcript of a bachelor's degree from an accredited institution in human services or a related field
- A personal statement (maximum 300 words). The statement should describe your goals and reasons for applying to this program and include information about previous course work, training or work experiences related to the program. It should also discuss specifically the strengths you bring and the areas of competencies you need to develop.
- MAT/GRE/GMAT exams not required

Program Requirements

A minimum of 21 semester hours over two years of study, is required. Students may elect to extend that timeframe or complete the required course work in less time. There are 50 hours of course-related field practica and 150 clock hours of Internship included in the program. Students may choose either the certificate alone or the certificate in conjunction with a Master's degree in Counseling-Mental Health.

Program of Study

Undergraduate Prerequisite Courses

General Psychology
Introduction to Sociology
Abnormal Psychology
Introduction to Human Services (this course may be waived if the student is working or has worked in a human services or forensic casework facility.)

Phase I			
PSY	*8100*	**Child Abuse and Neglect, and Other Individual/Societal Dysfunctions* ***or***	
PSY	*8120*	**Sexual Abuse of Children and Adolescents*	*3 S.H.*
PSY	*8172*	*Criminal Psychopathology*	*3 S.H.*
Phase II			
PSY	*8140*	*Alcohol Abuse and Other Addictive Disorders*	*3 S.H.*
PSY	*8174*	*Systems, Laws and Issues in Forensic Case Work*	*3 S.H.*
PSY	*8175*	*Treatment Issues and Intervention in Forensic Case Work*	*3 S.H.*
PSY	*8176*	*Mental Status Examination*	*1 S.H.*
		Elective Course Work	*2 S.H.*
Phase III			
PSY	*9065*	*Internship in Forensic Case Work*	*3 S.H.*
		Total for Certificate	***21 S.H.***

**Students must take at least one of these two courses. If comparable courses have been taken at the undergraduate level, the student may apply to her/his advisor to have them credited to this certificate program.*

Forensic Nursing Certificate Program

Program Objectives

This program provides an opportunity for advanced practice nurses who hold a master's degree in nursing from accredited programs to acquire specialization in forensic nursing. Forensic nursing is the application of nursing science to public or legal proceedings and the integration of the forensic aspects of health care with the bio-psycho-social education of the professional nurse. Students are prepared to deal with the prevention, scientific investigation, and treatment of victims of trauma and/or death as well as the investigation and treatment of perpetrators of abuse, violence, criminal activity, and traumatic accidents.

Program Description

The student in forensic nursing:

- is cross-trained in the principles and philosophies of nursing science, forensic science, and criminal justice
- assumes a mutual responsibility with law enforcement agencies and the courts in protecting the legal, civil, and human rights of victims of violent crimes, as well as the rights of perpetrators

Admissions Standards and Criteria

To apply for enrollment in the Forensic Nursing Certificate Program, a student must submit documents as outlined in the Graduate Admissions section as well as:

- An official transcript of a Master's degree in Nursing from an NLN-accredited program
- Three letters of recommendation documenting a minimum of one year of recent successful clinical practice or part-time equivalent
- A Massachusetts RN license (or indication of intent to apply for the same)
- MAT/GRE exams not required
- Written personal statement of career goals

Program Requirements

The program consists of five specialized courses in forensic nursing and a minimum of three related courses from the behavioral sciences, chemistry and criminal justice departments for a total of 22 credits. Four of the nursing courses contain a clinical/laboratory component, including a more extensive practicum.

Program of Study

A. Required cognates in the Forensic Nursing track			
CHEM	*7000*	*Criminalistic: Forensic Chemistry*	*3 S.H.*
One of the following courses:			
CJ	*8410*	*Criminal Law: Substantive and Procedural*	*3 S.H.*
PSY	*8174*	*Systems, Laws and Issues in Forensic Case Work*	*3 S.H.*
		Subtotal	*6 S.H.*
B. Required nursing courses in the Forensic Nursing track			
NURS	*8000*	*Introduction to Forensic Nursing*	*3 S.H.*
NURS	*8100*	*Scientific Foundations for Forensic Nursing Interventions*	*2 S.H.*
NURS	*8200*	*Forensic Nursing: Caring for Victims and Perpetrators I*	*3 S.H.*
NURS	*8300*	*Forensic Nursing: Caring for Victims and Perpetrators II*	*3 S.H.*
NURS	*9500*	*Practicum in Forensic Nursing*	*3 S.H.*
		Subtotal	*13 S.H*
		Total for Certificate	***20 S.H.***

Professional Mentoring for Teachers Certificate Program

Program Objectives

This Program provides teachers, who wish to further their professional development through graduate course work, an opportunity to develop attitudes and skills related to the role of a professional mentor.

Program Description

Through required courses and a mentoring internship, teaching professionals begin developing collegiality in relation to their profession and become more skilled in the areas of communication, peer consultation and leadership, reflection, problem solving, and evaluation.

Admissions Standards and Criteria

To apply for enrollment in the Mentoring for Teachers Certificate program, a student must submit documents as outlined in the Graduate Admissions section as well as:

- An appropriate teaching certificate
- MAT/GRE/GMAT exams not required

Program Requirements

The program includes course work which may, with the permission of an appropriate advisor, provide elective credits suitable for an MEd program in which the student is matriculated. Nine of the course credits are credits required of the CAGS in Consultation and Peer Leadership. With appropriate advising and planning, these credits can be applicable to such a CAGS program.

Program of Study

EDUC/SPED	*9010*	*The Adult Learner*	*3 S.H.*
EDLM	*9020*	*Collegial Supervision*	*3 S.H.*
SPED	*9200*	*Consultation Strategies*	*3 S.H.*
EDUC	*9360*	*Mentoring Internship: Program Design, Management, and Evaluation*	*3 S.H.*
		Electives (e.g. EDLM 9100, SPED 7650)	*3 S.H.*
		Total for Certificate	***15 S.H.***

Note: Students must have completed the three required courses prior to participating in EDUC 9360 Mentoring Internship.

Substance Abuse Services Certificate

Program Objectives

Provides specialized training in skills specific to working with substance abusers, including those with dual diagnoses, and the families of substance abusers.

Admissions Standards and Criteria

To apply for enrollment in the Substance Abuse Services Certificate program, a student must submit documents as outlined in the Graduate Admissions section as well as:

- A personal statement (maximum 300 words). The statement should describe your goals and reasons for applying to this program and include information about previous course work, training or work experiences related to the program. It should also discuss specifically the strengths you bring and the areas of competencies you need to develop.
- MAT/GRE/GMAT exams not required

Program Requirements

A minimum of 21 semester hours over two years of study is required. Students may elect to extend that timeframe or complete the required course work in less time. There are 50 hours of course-related field practica and 150 clock hours of Internship included in the program. Students may choose either the certificate alone or the certificate in conjunction with a Master's degree in Counseling-Mental Health.

Program of Study

Undergraduate Prerequisite Courses

General Psychology
Introduction to Sociology
Abnormal Psychology
Introduction to Human Services (This course may be waived if the student is working or has worked in a human services or in a substance abuse facility.)

Phase I			
PSY	*8140*	*Alcohol Abuse and Other Addictive Disorders*	*3 S.H.*
PSY	*8142*	*Intervention and Rehabilitation Services for Substance Abusers*	*3 S.H.*
Phase II			
PSY	*8143*	*The Impact of Alcohol Abuse and other Addictive Disorders on Family Systems*	*3 S.H.*
PSY	*8144*	*Case Management in Substance Abuse Services*	*3 S.H.*
PSY	*8148*	*Counseling the Substance Abuser*	*3 S.H.*
		Elective Course Work	*3 S.H.*
Phase III			
PSY	*9072*	*Internship in Substance Abuse Services*	*3 S.H.*
		Total for Certificate	***21 S.H.***

Graduate Course Descriptions

Fitchburg State College Course Numbering System

Undergraduate courses are numbered 1000-5999

Graduate courses are numbered 6000-9999

a. 6000-level numbers are reserved for In-service and updating courses.

b. Numbers 7000-9999 are assigned graduate courses (higher course numbers imply higher level courses).

Note: Course descriptions of all undergraduate and graduate courses can be obtained from the Office of the Registrar.

Waivers of listed course prerequisites, where granted, do not constitute waiver of required core courses or total program credit hours.

Biology

Mammalogy

BIOL 7001 ***3 cr.***

This course is an investigation of the evolution and present biology of mammals involving extensive use of native New England species. Laboratory work includes identification of mammal species from skins, skulls, and tracks. Field trips enhance familiarity with what is learned in the classroom. The course involves four hours of lecture/laboratory plus additional hours for field trips.

Freshwater Biology

BIOL 7003 ***3 cr.***

A field study course designed to study aquatic ecological systems. Daily field trips are taken to the lakes, ponds, streams, and rivers in the Fitchburg area to collect water samples and specimens. Laboratory analysis is conducted to determine the physical and chemical properties of the water and to identify and study the organisms.

Vertebrate Biology

BIOL 7004 ***3 cr.***

This course presents the eight classes of vertebrates with emphasis on vertebrates found in the New England area. Lectures emphasize phylogeny and taxonomy, distribution, reproduction, ecology, and behavior of each vertebrate class. The laboratory consists of two parts: (1) a synoptic review of major orders of each vertebrate class found in the N.E. area; (2) frequent field collecting trips to acquaint students with the habitat preferences of native vertebrates.

Biology of the Brain and Behavior

BIOL 7005 ***3 cr.***

This course focuses on the biological bases of behavior. A variety of media including lectures, journal articles, and films are used to study ethology, psychology, neurobiology and genetics in an attempt to understand the mechanisms underlying behavior.

Prerequisite: one semester of any of the following: General Biology, General Psychology, Anatomy and Physiology or Instructor's permission.

Medical Parasitology

BIOL 7006 ***3 cr.***

The course examines the biology of medically important animal parasites. Lectures emphasize clinical considerations, such as life cycles, modes of transmission, epidemiology, symptomatology, and treatment. Additionally, methods of collection and identification are explored.

Ecology

BIOL 7007 ***3 cr.***

The dynamic relationship between organisms and their environment is investigated in this survey of major ecological concepts and methodology. Field and laboratory work emphasize problem identification, formulation of hypothesis, data collection, and analysis and interpretation of results in terms of biological implications.

Winter Botany

BIOL 7008 ***3 cr.***

A comprehensive study of plants in winter designed to discover plant adaptations for survival during the cold season. Field trips are taken to observe and identify trees and herbaceous plants in winter conditions. Lectures and indoor labs are included.

Summer Field Botany

BIOL 7200 ***3 cr.***

A field study of trees, shrubs, fungi, mosses, and herbs found in New England. Daily field trips to collect plants and daily laboratory work facilitate the study of ecology and taxonomy of plants.

Evolution

BIOL 7300 ***3 cr.***

An introduction of the principles governing the evolution of living organisms. Emphasis is placed on the cause and affect relationship of various biological disciplines on the evolutionary process. A survey of paleontological evidence demonstrates how evolutionary principles have influenced life.

Prerequisites: undergraduate course in botany or zoology, ecology, and genetics.

Bioethics

BIOL 7400 ***3 cr.***

The purpose of this course is to communicate the process of ethical reasoning in conjunction with Biological science. Students gain an understanding of how cooperation between those concerned with the results of biological research and the makers of public policy must become a working hypothesis. Through an examination of the current literature, students uncover facts and general principles of bioethics and relate their near and long term consequences to moral positions.

Advanced Methods of Teaching at the Secondary Level I

BIOL 7500 ***3 cr.***

This course combines academic study with clinical practice and supervision. It focuses on learning theory and research-based effective instructional practices. Theories and topics to be studied, demonstrated, and practiced include learning styles, critical thinking, computer applications, and inclusive learning environments. Emphasis is placed on integrating culturally or linguistically diverse students and those with special needs. Interdisciplinary course development and implementation, student assessment including portfolio assessment, and writing are studied for utilization across the curriculum. Teacher/student interaction, communication, and collaboration skills, including use of family and community resources, are applied to advance student outcomes and enhance the teaching/learning process. Through teacher reflection techniques and feedback received from peers and supervisors, students continually improve their teaching/learning process.

Prerequisite: EDUC 7012 or provisional certification with advanced standing.

Advanced Methods of Teaching at the Secondary Level II

BIOL 7550 ***3 cr.***

This course is a continuation of BIOL 7500.

Prerequisite: BIOL 7500.

Marine Biology

BIOL 7600 ***3 cr.***

This course examines physical, chemical, and biological factors in the marine environment. The dominant animals and plants in salt marsh, sand beach, tide pools, and a rocky inter-tidal area are investigated. Data on physical and chemical conditions is collected and correlated with the composition, behavior, and physiology of the flora and fauna within each habitat. Saturday or Sunday field trips supplement lectures.

Independent Study

BIOL 8002 ***3 cr.***

The Independent Study provides an opportunity for Biology students to work independently on the development of a written work, a science curriculum, a job related document, or some other activity agreed upon by the student and the graduate faculty advisor. The final product of this study is a written or otherwise permanent documentation of the study completed.

Practicum

BIOL 8003 ***6 cr.***

The practicum provides an opportunity for students to gain teaching experience in area schools and in the college campus school Practicum experience is designed to meet the State requirements for advanced provisional teacher certification.

Curriculum and Technology

BIOL 8250 ***3 cr.***

This course looks at the integration of educational technology in the classroom, and its relationship to learning theories. Mac and IBM computer hardware, and interfaces for classroom inquiry including video and microscope cameras, digital image capture, scanners, and computer projection panels are examined. Students learn similarities between standard software programs available for writing, computation, and data analysis. It includes a survey of software for studies, ranging from Encyclopedias on CD-ROM to programs that are specific to the study of various topics in science, art literature, math, and language. The class explores the use of the internet as a classroom resource, the hardware and software necessary to get on line, search engines, browsers, URLs, online journals, education web sites, online interest groups, and how to design a web page.

Curriculum Development and Design

BIOL 8260 ***3 cr.***

This course is designed to provide students with knowledge and skills of the curriculum development-revision process. In collaborative groups, students review, revise and expand the curriculum and assessment procedures in order to integrate current research findings and education reform initiatives. Students articulate a general Curriculum map contextually appropriate for grade-level content as they plan for integrating content with social, behavioral, processing, thinking skills and Curriculum frameworks. Students design an integrated 9-12th grade curriculum that aligns content standards across disciplines. Finally, interdisciplinary groups design an integrated curriculum unit.

Research in Biology

BIOL 9004 ***3 cr.***

Research is carried out in a specific field of Biology that involves an in-depth exploration of a well-defined problem. The student must develop a hypothesis for the possible solution to the problem; develop the experimental technique to test the hypothesis; and develop a logical conclusion based upon the data collected. The final product is a written documentation of the research and results. Each study is done under the supervision of graduate faculty.

Thesis in Biology

BIOL 9010 ***3 cr.***

Students will conduct a research project which will result in a thesis. This thesis will be developed under the supervision of a thesis advisor and a thesis committee of at least three people.

Seminar in Biology

BIOL 9011 ***3 cr.***

This course is designed to prepare students for research careers. Topics covered are hypothesis formation, experimental design, literature searches, and quantitative methods. Emphasis is placed on student participation and evaluation of each topic. A final research proposal is required of each student.

Special Topics

BIOL 9100 ***3 cr.***

Course content varies from semester to semester, reflecting contemporary issues in the discipline and depending upon student and faculty interest.

Clinical Experiences

BIOL 9400 ***6 cr.***

The Clinical Experience is a capstone course allowing full integration and application of content knowledge and pedagogical theory and practice. In a high school classroom students incorporate all standards specific to the discipline in which certification is sought as well as all common standards for classroom teachers. A minimum of 400 clock hours or one full semester on-site under the auspices of the college is fulfilled. A research project is completed during the duration of the clinical experience.

Internship

BIOL 9500 ***6 cr.***

The Internship is a capstone experience allowing full integration and application of content knowledge and pedagogical theory and practice. Within the individual's classroom it incorporates all standards specific to the discipline in which certification is sought as well as all common standards for classroom teachers. A minimum of 400 clock hours or one full semester on-site under the auspices of the college is fulfilled. A research project is completed during the duration of the internship.

Communications/Media

Topics

COMM 9000 ***3 cr.***

Course content varies from semester to semester, reflecting contemporary issues in the discipline and depending upon student and faculty interest.

Communications Technology Forecasting

COMM 9010 ***3 cr.***

This course assesses new technologies and potential applications within communications/media and prepares students for long-range planning. Students examine digitization and new imaging, video technology, interactive and multimedia systems, wireless networks, groupware, desktop technology, and satellite communications. In addition students develop forecasts for their organizations using techniques such as The Delphi Survey, Trend Extrapolation, Relevance Trees, and Network Analysis.

Media Communications Facilities Design

COMM 9020 ***3 cr.***

A study of structural, technological, human, and environmental parameters required for comprehensive design specifications for new or renovated facilities as applied to media production and/or utilization. Students become familiar with blueprint reading, power requirements, electrical distribution, low voltage networking, heating and air conditioning, lighting, ergonomic design, OSHA and other safety codes and requirements. Emphasis is placed on analyzing vendor proposals and contracts.

Instructional Design and Analysis in Communications/Media

COMM 9030 ***3 cr.***

The course introduces the design of training programs and prepares students to conduct needs and task analyses, write measurable objectives, select appropriate media and delivery systems, and evaluate effectiveness of results.

Managing the Documentation Life Cycle, Part I

COMM 9071 ***3 cr.***

A study of internal communications problems associated with the design and development of information products. Students analyze documentation teams, DOC plans, corporate style guides, government and military standards, and interpersonal work style preferences for their impact on the documentation life cycle.

Managing the Documentation Life Cycle, Part II

COMM 9080 ***3 cr.***

A study of external communications problems associated with the design and development of information products. Examines document design, document maintenance, editing and production problems, desktop publishing, online documentation, and interactive communications systems for their impact on the document life cycle.

Interactive Multimedia

COMM 9090 ***3 cr.***

A presentation of organizational structure and teamwork requirements and their impact on timeline demands of various multimedia designs. Analysis of project objectives for designs and paradigms of interactive formats is conducted for presentations, training, marketing, and kiosks. Students survey hardware and software options for addressing project needs.

Communications Research Methods

COMM 9110 ***3 cr.***

An examination of the various research tools and methodologies used in the communications field to produce a viable thesis proposal. Students are familiarized with methods of content analysis, audience research, needs assessment, and the use of statistical procedures to quantify value and variable measurement. The value of research conducted by others is recognized as a tool in conducting one's own research.

Legal and Ethical Issues in Communication

COMM 9120 ***3 cr.***

The course analyzes fiscal issues such as financial control systems, budgeting, promotional strategies, direct marketing, capital maintenance, amortization, contracting for services, taxes, total quality management (TQM), and managing by objectives. Students observe how the changes in national and international business relationships impact the media industries. In addition the ramifications of instant information on communications, and trends such as downsizing, outsourcing, and networking are explored. Lastly, students become familiar with legal issues, such as copyright, contracts, releases, royalties, video publishing, unions, multimedia, and ownership.

Effective Leadership and the Media Manager

COMM 9130 ***3 cr.***

The course provides a perspective on the internal politics, legal regulations, and organizational strategies for communicating vertically, horizontally, and diagonally within an organization. Students examine issues pertaining to corporate culture; diversity in the workplace; principles and legal regulations regarding hiring, firing, promoting, and disciplining employees; managing successful meetings; and conflict management.

Managing Communications

COMM 9140 ***3 cr.***

The course presents the principles of formulating persuasive strategies for creating written, electronic, and mediated communications. Students become familiar with current computing hardware, software, accessories, interfaces, and applications helpful to the media manager for presentation purposes.

Practicum in Communication

COMM 9200 ***6 cr.***

A practical experience in which students apply knowledge and skills in a real-life problem-solving situation. Students receive first-hand experience in identifying the problem, setting the parameters, planning for the application of human and technological resources, and evaluating the outcome. A mediated oral presentation of the project is made to the sponsoring organization and to the graduate advisor.
Prerequisite: permission of Advisor.

Thesis in Communication

COMM 9980 ***6 cr.***

An empirical study of a proposition stating the relationship between two or more concepts, phenomena, or events. This critical analysis focuses on a current or potential problem or practice facing managers of business, industry, government, and health service media centers. The study includes a research procedure for the tabulation, statistical analysis, and interpretation of numerical data.
Prerequisites: permission of Advisor and COMM 9110.

Computer Science

*Asterisk indicates that the course is offered infrequently.

Programming under UNIX in C

CSC 7000 ***3 cr.***

An advanced level programming course exploring the 'C' language. Students are expected to be familiar with two other programming languages and data structures. Special emphasis is placed on I/O in the UNIX environment.
Prerequisite: CSC 2560.

Operating Systems Concepts

CSC 7010 ***3 cr.***

This course discusses the following major functional components of modern operating systems: File Systems, CPU scheduling, Memory Management, Virtual Memory, Secondary Memory Management, Concurrency, and Security. The student also explores three current Operating Systems (including Windows-NT, OS/2, IBM's VM, DEC's VMS, and UNIX) as well as future Operating Systems in light of the functional components listed above.
Prerequisite: CSC 3100, CSC 8180.

Design and Analysis of Algorithms

CSC 7100 ***3 cr.***

This course discusses the complexity of algorithms and covers the following topics: mathematical algorithms, sorting and searching techniques, string processing, geometric algorithms, graphs and networks. The classes of belonging to classes P, NP, NP-complete are discussed.
Prerequisite: CSC 3700.

*Simulation Methods I

CSC 7130 ***3 cr.***

The use of the computer as an extension of analytical techniques for systems is studied. Students explore the theory of queuing and stochastic process as applied to system description and performance prediction.
A comparison of discrete system simulation languages is made. Simulation methodology, including generation of random numbers and variates, design of simulation models of discrete systems, analysis of data generated by simulation experiments, and validation of simulation models and results, is included.

Structured Systems Programming I

CSC 7140 ***3 cr.***

The course demonstrates the application of structured programming to the construction of system programs, in particular, compilers. The course begins by summarizing the structured programming style and notations to be used. The course work continues with the development of compiler for minipascal up to and through semantic analysis. The generation of object codes is studied in a succeeding course.
Prerequisite: CSC 7010 or CSC 7100.

Software Development in Computer Graphics

CSC 7160 ***3 cr.***

This course presents an in-depth introduction to state-of-the-art interactive computer graphics algorithms with emphasis on the GKS standard. 2-D and 3-D viewing, clipping, and geometric modeling are studied along with raster extensions and mathematical algorithms.

Structured Design

CSC 7220 ***3 cr.***

This course is designed to provide students with practical experience and a set of tools for the development and implementation of software systems. All phases of a software development cycle are covered. The student is instructed as to the terms and methodology needed to participate in an active project. All projects are developed in C. A review of C is conducted that spans basic data types to reusable and complex data structures made available by C.
Prerequisite: experience in software development equivalent to an undergraduate degree in Computer Science.

Higher Order Languages

CSC 7250 ***3 cr.***

Students study several higher order languages, including Pascal, Prolog, and APL, with an emphasis on the structures of the languages. An appreciation of the fundamental similarities and differences among the languages, in which semantics are more significant than syntax, is developed. Typical applications suitable for each language are given. Applications revealing the weaknesses of a particular language are also considered.
Prerequisites: two higher order languages.

Database Design

CSC 7500 ***3 cr.***

This course covers concepts of database systems in general and relational database systems in particular. A theoretical foundation for the database field concepts of SQL, database design, entity/relationship model, and data protection is studied. As part of the course, students are required to design and implement a database.

Microprocessor Systems

CSC 7510 ***4 cr.***

This course studies 16-bit and 32-bit architecture, hardware, software, interrupts, and memory organization. In addition, instruction repertories, "pipelining", virtual addressing, cache organization, link structures, and data transfer modes are included in study.

Advanced Systems Programming: UNIX & C II

CSC 8000 ***3 cr.***

This advanced level programming course explores the C Language. Students are expected to be familiar with two other programming languages and data structures. Special emphasis is on I/O in the UNIX environment.
Prerequisite: CSC 7000.

Advanced Operating Systems

CSC 8010 ***3 cr.***

This course emphasizes multi-user modern operating systems, file management, scheduling, methods of memory management, virtual memory, and future techniques in parallel processing.
Prerequisite: CSC 7010.

Data Communications and Networking

CSC 8020 ***3 cr.***

The first third of the course deals with data communications concepts and terminology. The course then covers the structure of modern multi-layer protocols, for example, IBM's SNA and other comparable ISO standards (X.25 et al); the design of store and forward networks, such as the historic ARPANET and its commercial variants TELENET and TYMENET; and the operation of local area networks of both the base band (ETHERNET) and the broadband (MITRENET, WANGNET) variety.
Prerequisite: CSC 3400.

System Reliability

CSC 8030 ***3 cr.***

This course discusses issues regarding system reliability, particularly as computer systems become more complex and the potential for problems increase. Students study the wide range of effects system faults generate. Course topics include: defining system reliability and availability; the impact of system downtime; reliability of system design; and methods to prevent downtime, as implemented in both hardware and software.

Object Oriented Programming in C++

CSC 8100 ***3 cr.***

This course is designed to introduce the student to the field of Object Oriented Programming (OOP) by focusing on the C++ programming language. This complex and emerging language is presented in conjunction with the Object Oriented Programming and Object Oriented Design paradigms. The student is exposed to readings of current literature on the subject in addition to programming assignments to reinforce these principles.
Prerequisite: it is expected that the student is proficient in the C programming language.

Graph Algorithms

CSC 8110 ***3 cr.***

This course covers some of the basic graph algorithms used to solve real problems that arise frequently in computer science. The topics covered are: definition and representation of graphs, shortest path problems, depth first and breadth first search and their applications, minimum spanning trees, network flows and graph connectivity, planarity, traversibility, coverings and colorings, plus other topics, if time permits.
Prerequisite: CSC 3700.

Local Area Network

CSC 8120 ***3 cr.***

The purpose of this course is to study new techniques in the theoretical design of local area networks, as well as to gain practical experience in the installation, maintenance, and management of LAN networks. The course includes the study of at least four different network systems, such as Novell, Windows-NT, UNIX, and NFS. Furthermore, SNMP management techniques are also investigated.
Prerequisite: an undergraduate course in Networking or CSC 8020.

Expert Systems

CSC 8150 ***3 cr.***

This course studies the techniques used to develop expert systems. Knowledge representation schemes and the languages utilizing those schemes are analyzed. Students review several classical expert systems and discuss the current state of the art. Contrasts are made among procedure-oriented languages.
Prerequisites: two high level programming languages.

Computer Graphics II

CSC 8160 ***3 cr.***

This course is a continuation of Computer Graphics I, CSC 7160. The course covers state-of-the-art raster algorithms for polygon handling, including filling and clipping. Then, an extensive study of the mathematics of 3-dimensional projective geometry is conducted.
Prerequisite: CSC 7160.

Windows Programming using MFC

CSC 8180 ***3 cr.***

This course focuses on the development of Windows application. The Windows application program interface is used to create a file browser application. Concepts such as Dynamic Data Exchange (DDE) and Multiple Document Interface (MDI) are reviewed. Students create their own C-based window application program, which includes dialog boxes, pull down windows, and icons.

UNIX Network Programming

CSC 8190 ***3 cr.***

This course is designed for experienced C programmers who have little or no previous network programming experience. The course introduces Ethernet, the TCP/IP family of protocols, sockets, virtual circuits, datagram circuits, and programming concepts. Students are required to complete regular programming exercises as well as a final project in C under the UNIX platform. The BSD socket interface is used in the course, and others, including the Transport Layer Interface and Remote Procedure calls, are discussed.
Prerequisite: familiarity with UNIX and knowledge of C Programming.

Topics in Computer Science

CSC 8200 ***3 cr.***

Course content varies from semester to semester, reflecting contemporary issues in the discipline and depending upon student and faculty interest.

Software Tools Under UNIX

CSC 8230 ***3 cr.***

This course provides an overview of the UNIX operating system. The student learns how to use high-level utilities as well as program debugging tools and system level utilities. Multi-user interaction is explored. Students are strongly encouraged to be familiar with at least one high-level programming language.

Compiler Design and Construction

CSC 8240 ***3 cr.***

This course explores the theory of compiler design, including lexical analysis, syntax analysis, and code generation. Grammar and language are reviewed, and the basic trade-offs in compiler construction are explored. A simplistic language expressed in BNF is used to construct portions of a compiler using recursive descent.
Prerequisite: CSC 8140.

Artificial Intelligence

CSC 8250 ***3 cr.***

This course studies computer vision, speech understanding, natural language understanding, machine learning, and expert systems. Classical results in each area are presented, and the state-of-the-art is indicated. Also studied are problem solving techniques and search philosophies.

Introduction to Ada

CSC 8300 ***3 cr.***

This course provides an introduction to Ada language—a modern general-purpose programming language that meets the needs of large system developers and, as such, embodies many advanced software engineering features. Topics include: the software crisis, history of Ada, concepts and goals, statements, subprograms, packages, generic packages, and tasks. The course requires students to run and modify existing program units and to design, develop, and test program and/or library units, and to apply "tool kit" packages and generic packages.
Prerequisite: Working knowledge of a high-level programming language and data structures.

Measurement and Control

CSC 8610 ***4 cr.***

A detailed study of electro-mechanical and semiconductor sensors. Students examine transducers (temperature, pressure, strain, biomed, acoustic), A/D and D/A conversion, signal processing, PCM encoding and recording, radio telemetry, and microprocessor interfacing. The course includes lab work to demonstrate the basic principles of sensor operations as well as application techniques. Students undertake projects to illustrate microprocessor control over measurement systems. The course stresses student circuit design and hard-wired implementation of circuits to be used as building blocks for a modular data acquisition system.

Independent Study

CSC 9000 ***3 cr.***

The Independent Study provides the opportunity for students to explore computer science independently of a classroom. The Study must be planned and approved by the graduate advisor.

Master's Thesis

CSC 9010 ***6 cr.***

Creative Arts

Creative Teaching

CRAR 8140 ***3 cr.***

This course applies creative problem solving techniques and the arts to other content areas of the curriculum.

Celebrating Diversity through the Arts

CRAR 8145 ***3 cr.***

The course is a study of methods used for balancing Euro-centric cultural backgrounds; celebrating cultural diversity through the arts; building respect and understanding through cultural grid systems; creating harassment-free learning environments; teaching without gender bias; understanding, discussing, and preventing classroom sexism, racism, anti-Semitism, and homophobia.

Arts Technology in the Classroom

CRAR 8146 ***3 cr.***

This lab experience provides professional development in the Arts Technologies. Emphasis is placed on integrating these exciting tools into varied learning. Topics include both Visual Arts and Music applications such as digitized images, digital sound, scanners, synthesizers, video overlay card, MIDI laser discs, sequencers, and sound design. This course is a must for educators from all disciplines and levels. No prior technology expertise required.

Dance in Education

CRAR 8350 ***3 cr.***

An exploration of the field of creative movement and structured dance forms. Students learn applications for working with children through movement and are encouraged to seek personal dance experiences.

Art and Human Development

CRAR 8500 ***3 cr.***

This course is applicable to students who are in human services fields, including diverse groups teachers, social workers, recreation directors, religious educators, and others. Students use hands-on activities to demonstrate how concepts and practices are learned and to facilitate students' needs.

Supervising, Directing, and Leading in Arts Education I

CRAR 9051 ***3 cr.***

The course involves discussions about inter-departmental and interdepartmental relations, faculty development, grants, community relations, the diversity of a community, the needs of exceptional learners, and other administrative concerns.

Supervising, Directing, and Leading in Arts Education II

CRAR 9052 ***3 cr.***

The course involves of discussion of such topics as the efficient and humane use of personnel, finance, curriculum, and physical resources. The evaluation and supervision of programs and personnel is also covered.

Creative Arts Research

CRAR 9060 ***3 cr.***

Studies include an inquiry into the role of the creative process in education and the arts, as well as the integration of the arts in education. Research into the cultures of various community groups and the inclusion of exceptional learners in the educational process are considered.

Creative Arts Curriculum Development and Applications

CRAR 9070 ***3 cr.***

The design, implementation, and evaluation of a project in the community is undertaken.

Arts Presentation

CRAR 9090 ***3 cr.***

Students create a culminating project after completing at least eighteen semester hours in the degree.

Prerequisite: CRAR 9070.

Criminal Justice

Core I: Foundations

CJ 7200 ***6 cr.***

Students must register for the six credit core which includes the following three course titles:

History and Development of Legal Systems

CJ 7220

This area of study develops student awareness of the historical foundations of American legal philosophy and the legal system. An understanding of the relationship of law and government as well as the court system and the Constitutional rights of individuals under this system is gained.

Criminal Justice Process

CJ 7240

This area of study explores the organization and function of the criminal justice system.

Social Relations and the Legal System

CJ 7260

This course explores law as a social process that is both a source of order and of conflict.

Core II: Applications in Criminal Justice

CJ 8400 ***6 cr.***

Students must register for the six credit core which includes the following course titles:

Criminal Law: Substantive and Procedural

CJ 8410

This area of study examines both substantive and procedural criminal law. Within the context of the historical development and philosophy of law, students are introduced to the definitions and classification(s) of crime and their application to the system of criminal justice.

Research Methods

CJ 8430

This course of study allows the student to develop competencies in understanding, analyzing, and questioning research findings. Basic techniques and knowledge are introduced to assist the student in locating, understanding, and using resources relevant to legal analysis of the law, measurement of crime and criminal behavior, and interpretation of research findings.

Core IIB: Applications

CJ 8500 ***6 cr.***

Includes the following six course titles:

Criminology

CJ 8530

An examination is conducted of the historical development of criminological theories, including the Classical School of the eighteenth century, the Marxist and Socialist Schools of the late nineteenth century, and contemporary theories of the twentieth century. Emphasis is on social, political, economic, religious, racial, gender, and emotional characteristics of crimes and offenders.

Administration and Organizational Development

CJ 8540

This component increases the students' awareness of organizational dynamics by providing them with the skills to analyze organizations and to learn to view them from several frames of reference.

Group Process: Individual and Interpersonal Skills

CJ 8550

This component is designed to enhance participants' understanding of individual and interpersonal behavior and group dynamics. Students examine the forces that operate within a group, describe and identify group norms, and apply several methods of small-group theory to management problems.

Contemporary Issues

CJ 8560

The course examines current social trends as they confront the criminal justice professional in the field, in institutional settings, and in the courts. Students explore contemporary theories and responses to emotionally demanding issues that challenge the community and the criminal justice system, as well as the strategies for responding to these problems.

Technology

CJ 8570

The course provides an overview of the accepted technology practiced in the field of criminal justice. The fields of law enforcement, probation, and corrections are examined, and technological advances are discussed at both the juvenile levels in each system.

Ethical Issues in Criminal Justice

CJ 8580

An examination of major ethical issues that span the components of the criminal justice system. Students will explore the ethical challenges and ensuing dilemmas that occur in daily professional work along with strategies for responding to job situations.

Legalities of Criminal Justice Administration

CJ 9620* ***3 cr.***

The course examines contemporary issues facing criminal justice administrators and explores the legal considerations necessary in determining sound managerial solutions. Topics of discussion include: the legal implications of employee hiring, training, promotion, and discipline; internal investigations; discrimination challenges; affirmative action plans; labor relations and unions; and the development of departmental policies and procedures. Students examine each topic within the realm of relevant state and federal law. This course is especially fitting for practitioners who are faced with policy-related decisions in the criminal justice field.

Technology and Legal Limitations

CJ 9640* ***3 cr.***

This course surveys the latest technology used in the criminal justice field for investigative procedures, crime scene analysis, interviews, surveillance, and evidence collection. The course is designed to balance the limitations of advancing technology within the limitations of the law. The ethical question "Does the End justify the Means" is addressed throughout class discussions and case studies. Guest speakers with expertise in the technology field enhance the student's understanding of and appreciation for the use of investigative techniques.

Professional Issues: Liabilities and Challenges

CJ 9660* ***3 cr.***

This course clarifies the ideological conflicts—from enforcement to rehabilitation—that may be encountered by the criminal justice practitioner. Through case studies, this course focuses on the legal and practitioner responsibilities of the criminal justice professional including: liability standards and philosophies of practice, and professional ethics. Attention is paid to the invisible effects of discretion as a part of the decision making process.

Cultural Diversity and Communication

CJ 9680* ***3 cr.***

This course reviews individual and group models of relationships between criminal justice agencies and the public, with emphasis on gender, race, and ethnic differences. Special attention is paid to areas of potential conflict and cooperation with distinctive cultural groups. Alternative dispute resolutions are emphasized, including problem solving, negotiation, meditation, and conflict resolution strategies.

Core III: Theory and Practice/ Capstone Experience

CJ 9800 ***6 cr.***

Option I: Internship

CJ 9820

The Capstone Internship is a supervised, field-based (300 hours) learning experience in an approved criminal justice agency. Responsibilities can include administration, case/clinical work, training and development, or research. The student is responsible for systematically applying theoretical concepts in an applied and practical way to the work of the organization and contributing to the goals of the criminal justice system. Placement is facilitated through the Field Placement Office, Department of Behavioral Sciences, in accordance with departmental policies. The Internship is monitored by a faculty member who conducts on-site evaluations of the student's skills and competencies. Students are required to meet as a group bi-weekly and complete seminar assignments including a paper discussing a literature review of relevance to the Internship and a discussion of the application of the literature to the field experience.

Option II: Project

CJ 9840

The Capstone Project is a significant undertaking appropriate to the criminal justice field and reflects originality and independent thinking. The Project must be a systematically organized effort with appropriate form and methodology. Projects may vary considerably from developing a prototype service/program to undertaking a media project. A written abstract is required and includes an articulated rationale, explained significance of project, identified objectives, and conclusions/ recommendations. The student works under the supervision of a faculty member and (usually) in cooperation with an approved criminal justice field site. The focus of the project must be approved by the Graduate Committee on Criminal Justice.

Option III: Thesis

CJ 9860

The Capstone Thesis is supervised, systematic research or analytical study of a significant problem/issue, which results in an original, written product. Students are challenged to think independently and critically throughout the process of developing the study. The paper must reflect an organized effort with an appropriate and useful format through which to discuss a comprehensive review of the literature, problem identification, assumptions, significance of the study, sources and methods of gathering and analyzing information, and conclusions/ recommendations. The student works under the supervision of a faculty member, and the topic of the thesis must be approved by the Graduate Committee on Criminal Justice.

Seminar

CJ 9880

All students participating in the CAPSTONE experience, regardless of the option chosen, meet together once every two weeks for a group discussion. Students share scholarship from their works in progress and discuss issues related to their CAPSTONE experience. Faculty facilitate the discussions and oversee the student's work. At the end of the CAPSTONE experience, students present the results of their internship, project, or thesis to the entire CAPSTONE group.

Early Childhood/ Elementary/ Middle School/ Secondary Education

Topics

EDUC 7000 ***3 cr.***

Course content varies from semester to semester, reflecting contemporary issues in the discipline and depending upon student and faculty interest.

Writing to Learn

EDUC 7001 ***3 cr.***

This research-based course is designed for classroom teachers, administrators, curriculum coordinators, Chapter I, ESL, Bilingual, and special needs teachers who want to involve themselves in the writing process and become more knowledgeable about the teaching of writing.

Developing Math Materials for Classroom Use

EDUC 7007 ***3 cr.***

This course involves the construction and use of varied math materials used for instruction in K-12 classrooms. Displays of multi-level, multi-media materials emphasize hands-on methods of instruction. Scheduling and evaluative techniques are also discussed.

Construction and Use of Reading Games

EDUC 7008 ***3 cr.***

Participants develop and assess learning games used for reading instruction in grades K-12. Many methods and materials are presented, shared, and discussed by the instructor. Reading games are made by course participants to meet their individual needs in the classroom.

The Modern Secondary School

EDUC 7012 ***3 cr.***

This course is required of all MAT candidates who have no certification to teach. It covers a broad range of issues faced by teachers in today's secondary schools. Students will become familiar with the complexities of secondary school teaching and its demands. It includes 75 hours of pre-practicum experience.

Perspectives in Secondary Education

EDUC 7016 ***3 cr.***

This course provides an overview of teaching at the secondary level. Current issues and practices in the field are explored. Students critically examine their own beliefs and assumptions about the teaching profession.

Connecting Reading and Writing

EDUC 7021 ***3 cr.***

This research based course is designed for classroom teachers, administrators, Chapter I, ESL, Bilingual, and special needs teachers who have participated in "Writing To Learn" and would like to become more knowledgeable about the relationship between reading and writing. *Prerequisite: EDUC 7001 or permission of the Instructor.*

Teaching Science in the Elementary and Middle School

EDUC 7025 ***3 cr.***

This course covers contemporary thinking, practices, and research in the teaching of science to elementary and middle school students. Emphasis is on providing innovative hands-on experiences for students.

Advanced Concepts and Methods of Elementary and Middle School Math

EDUC 7040 ***3 cr.***

Participants investigate methods and materials used in elementary and middle school programs. Students develop functional math skills for use by elementary and middle school teachers. This graduate course includes information on math principles (set, function, probability and statistics, geometry, and measurements, algebra, and computer awareness) and provides opportunities for the application of such information.

Whole Language in the Elementary School

EDUC 7101 ***3 cr.***

This course provides a study of reading and writing processes from a psycholinguistic viewpoint. Whole language strategies for developing meaning including charts, chants, and shared reading are explored. Emphasis is on theory and effective practice.

Early Childhood Education Issues: A Seminar

EDUC 7170 ***3 cr.***

This course is designed to investigate issues and problems related to the education of young children. Emphasis is placed on current research and developmental theories related to the emotional, social, cognitive, linguistic, motoric development of a child and learning theories. Methodological and curricular concerns, teaching strategies, and child-centered issues are explored. Other topical areas include developmentally appropriate practices, national accreditation, and teacher training in early childhood education. As part of the seminar students are required to undertake a library research paper on some aspect of Early Childhood Education.

Play in Early Childhood Education: Theory, Research, Practice

EDUC 7190 ***3 cr.***

This course is designed for Early Childhood Educators and students of Early Childhood Education who are interested in investigating play—the most important means that young children have in growing cognitively, socially, emotionally, physically, linguistically, and motorically. Theories of play, methods to enhance development through play, effective approaches to support young children's play, as well as materials and resources are explored.

Advanced Methods of Teaching Social Studies: A Computer Based Approach

EDUC 7250 ***3 cr.***

This course is designed to integrate the underlying philosophy, theory, and current empirical evidence related to the teaching of social studies with a computer based methodology. Participants develop learning activities and use appropriate software, including data bases, tutorials, simulations, and integrated packages, on Macintosh computers. No prior knowledge or experience with computers is necessary.

Advanced Child Development

EDUC 7300 ***3 cr.***

This core course explores human growth and development from birth to age eighteen. Particular attention is given to exploring the relationship between developmental theory and knowledge and educational decisions and practice. Various theoretical perspectives are covered as well as specific developmental areas, such as physical-motor, cognitive, language, social, and emotional development. How children develop as thinkers and learners, specifically how problems are solved at different points in development, is emphasized. In addition, students develop a clear understanding of the process of objective observation of

children, as well as observation and recording skills appropriate for investigating various aspects of child development and behavior. Dual Stage Certification Track students complete a pre-practicum experience.

Contemporary Issues in Education

EDUC 7400 ***3 cr.***

This core course is designed to encourage students to think about the history and foundations of educational practice and issues. Students reflect upon past, current, and emerging educational practices and issues using a variety of frameworks including: historical, theoretical, social, political, and legal. The current issues discussed include relating to teaching as a profession. Particular emphasis is placed upon rethinking personal assumptions, considering alternative perspectives, and investigating current and emerging educational theories, practices, and issues.

Curriculum Design and Implementation for Multi-Need Populations

EDUC 7500 ***3 cr.***

This core course is designed to provide students with knowledge and skills of the curriculum development process as well as an awareness of societal demands on the curriculum. Effective curriculum development and implementation is a dynamic and continuous process through which teachers can plan, implement and evaluate the instructional program in a systematic and logical way. Particular attention is given to designing and organizing curriculum and selecting teaching strategies, which effectively create a learning environment to meet the diverse needs of students. Students cover the major components of the curriculum development process including developing philosophy and objectives, needs assessment, instructional planning and implementation, assessment and evaluation, and curriculum refinement. Emphasis is given to the curriculum areas of Fine Arts, Math, Science, and Social Studies. Students demonstrate curriculum competencies through the development of various curriculum projects, which include understanding a variety of teaching strategies, resource applications, and student assessment. Dual Stage Certification Track students complete pre-practicum experience.

Advanced Assessment, Design, and Evaluation of the Middle School Curriculum

EDUC 8150 ***3 cr.***

This course studies the historical and philosophical foundations of curriculum development in the middle school. By looking at various curriculum models, existing curriculum, the nature and needs of the middle school student, subject area knowledge, established standards and societal issues, students fully explore the question, "What ought to be the curriculum of the middle school?" Special attention is given to interdisciplinary, thematic planning, and instruction.

Qualitative Reading Assessment and Analysis

EDUC 8200 ***3 cr.***

This core course focuses on reading assessment through use of informal procedures, such as miscue analysis, metacognitive assessments, schemata assessments, informal reading inventories, and other teacher initiated and designed assessment procedures. Additionally, the course emphasizes teacher decision making and instructional planning based on qualitative analysis of children's reading and study strategies.
Prerequisites: a course in Literacy Education at the graduate level.

Family Involvement in Early Childhood Education

EDUC 8250 ***3 cr.***

This specialized course explores the importance of family interaction with the Early Childhood Educator. Students receive a general overview of parent-child interactions, parent involvement, parent education, and parent participation in Early Childhood Education. Students are exposed to the various theoretical and practical approaches to family involvement practices in the Early Childhood Education setting. Awareness, understanding, and appreciation of various family needs, circumstances, and cultural experiences are promoted. Family-professional partnership models, which effectively serve families with a variety of needs and experiences, are explored.

Research in Education

EDUC 8300 ***3 cr.***

In this core course students engage in the scientific reasoning process and reflect upon this process as it relates to the educator's role. The goals and methods of educational research, the reading and analysis of primary sources, development of an educational research proposal using research, and the teacher as researcher, are explored. In addition, course material includes currently used research strategies, such as ethnographic studies and the case study approach. Emerging educational practices that are research-based are highlighted. Appropriate inferential and descriptive statistical methodologies are also studied.

Middle School Instructional Strategies and Practices

EDUC 8350 ***3 cr.***

This course provides an in-depth look at a variety of instructional practices and strategies appropriate for effective teaching and learning of the early adolescent. Attention is given to addressing the needs of diverse student populations, including but not limited to children with different learning abilities, exceptional talent, different culture/ethnic background or at-risk characteristics. Active and interactive learning strategies are emphasized.

Advanced Social Studies in Education

EDUC 8360 ***3 cr.***

This course assesses traditional as well as new technologies and their potential applications within the field of social studies education from a historical, theoretical, and practical perspective. Students examine how to integrate instructional experiences that equalize educational opportunities for a diverse and inclusive student population and explore opportunities for enhancing multicultural pluralism. The course investigates social studies content, strategies, and techniques deemed essential to fulfill varied curriculum requirements by exploring the integrative and interdisciplinary nature of the content. Action-oriented processes are used to focus on the pertinent questions and issues at local, state, and national levels as well as those of global importance. Also inquiry-oriented processes are used to require students to ask questions and further develop and expand academic, social, and thinking skills and/or strategies through a variety of approaches to research in the social studies/social science areas. Students are

encouraged to challenge convention, raise questions about social assumptions and identify critical issues in social studies education.

Literacy in Elementary and Middle School Education

EDUC 8400 ***3 cr.***

This specialized course in literacy education examines literature and research related to literacy development. Specific attention is focused on language development, reading/writing process and on literature-based instruction. Classroom strategies and curriculum adaptations that enhance the learning and motivation of diverse learners, including those which integrate the Fine Arts, are presented, implemented, and appraised. Dual Stage Certification Track students complete a pre-practicum experience.

Literacy in Early Childhood Education

EDUC 8450 ***3 cr.***

Advanced strategies for literacy development of young children are presented in this specialized course. Specific focus is placed on emerging literacy and reading process and adaptations, including adaptations which integrate the Fine Arts to address the needs of all learners. Students examine the interdependence of reading and writing on oral receptive and expressive language. A review of the literature that emphasizes theoretical and empirical research related to literacy development and its implications for teaching young children is investigated. Dual Stage Certification Track students complete a pre-practicum experience.

Advanced Emergent Literacy: New Perspectives, Pre-K - 2

EDUC 8480 ***3 cr.***

Emphasis in this course is placed on reading and understanding the implications of recent research in emergent literacy. In addition students observe and respond to early reading and writing behaviors. Students learn to support early writing, develop directional principles, and understand concepts about print and early reading strategies from Reading Recovery by identifying and selecting natural language texts that promote a self-improving reading system and using picture book literature in gaining literacy. Participants learn to make instructional decisions based on current knowledge of emergent literacy and their own close observations.

Prerequisites: EDUC 7101, 8400, or 8450.

Developmental Assessment in Early Childhood Education

EDUC 8500 ***3 cr.***

This is an advanced course in the design, development, and implementation of developmental assessment tools in Early Childhood Education. Students explore the meaning of developmental assessment, aspects of assessment reliability and validity, test construction and administration, limitations of assessment, observation as a tool for assessment, and other related topics. Students evaluate and demonstrate the uses of various assessment instruments.

Advanced Seminar in Child-Centered Issues

EDUC 8600 ***3 cr.***

This specialized course in the Elementary Education program provides students with the opportunity to explore, discuss, and reflect upon a variety of child-centered issues. Background information for discussions includes research results concerning environments which support and enhance optimum development. Some of the topics covered in the class are multi-cultural/multi-ethnic education, family-teacher partnerships, self-esteem research, mainstreaming, cognitive styles and creativity, the educator's role with abused children, and educating from student strengths and interests.

Advanced Strategies and Approaches for Teaching Critical Thinking in the Content Areas

EDUC 8650 ***3 cr.***

This specialized seminar integrates all content area subjects in an elementary school curriculum. In particular, it introduces students to the nature and scope of Mathematics, Science, Social Studies, and Fine Arts in the elementary school. Students investigate a variety of content models and curriculum programs while they explore theoretical foundations, practical applications, and current issues in the content areas. Strategies and modern techniques for effectively working with diverse populations of students, including computer application in the various content areas, are researched and emphasized. Students demonstrate competencies by developing and demonstrating techniques and activities which illustrate how concepts and practices are learned in each module and how they relate to student needs.

Seminar in Early Adolescent Issues

EDUC 8750 ***3 cr.***

This specialized course in the Middle School Education program gives students the opportunity to identify, explore, discuss, and reflect upon a wide variety of early adolescent issues central to the adolescent students' education, growth, and development. Background information for discussions include research results concerning environments, which support and enhance adolescents optimal development. Topics explored in the course may include self-esteem; family, school, and community partnerships; learning styles; social changes; and the role of the middle school teacher.

The Adult Learner

EDUC 9010 ***3 cr.***

The focus of this course is on the nature of the adult learner. Through journals and readings students gain an understanding of how the adult learner processes experience, how learning is best structured, and how feedback should be provided. An extension of this focus includes an investigation of human relations, gender uniqueness as well as relations within diverse populations as they impact the personal competence of the adult learner.

Clinical Internship I and II

EDUC 9200/9201 ***3 cr./3 cr.***

This internship is required of students in the Early Childhood Education, Elementary Education, and Middle School Education Clinical Tracks to provide students with the opportunity for supervised direct teaching in the role and at the level of the certificate sought. Students demonstrate advanced pedagogical and content knowledge, skills, understanding and collegial orientation, and are involved in advanced seminar work. Students are required to begin the investigation of some aspect of educational theory or practice and complete a research project. Matriculated students in the Early Childhood Education, Elementary Education, and Middle School Education Clinical Tracks are eligible for enrollment in an Internship program if they meet the following requirements: successful completion of three core courses "(A) level" and one specialization course "(B) level", an approved plan for simultaneous enrollment in one or two specialized

courses, and a plan for an Internship approved by their advisor one semester in advance.
Note: Clinical Internship I and II may be taken in the same semester or in successive semesters.

Educational Strategies

EDUC 9250 ***6 cr.***

Given the context of the adult learner and the process of implementing educational change studied in the previous courses in the CAGS sequence, the focus of this course is on effective and promising strategies which improve teaching and, thereby, learning for all children. Students become proficient at critiquing the design, analysis, and results of research to determine which strategies hold promise for improving teaching. Students also study current effective strategies in the field, such as cooperative learning, social interaction, peer mediation, teaching/learning styles, cross cultural competency, apprenticeship models, reciprocal teaching, and project approach, as well as implementation of these strategies in their schools.

Internships and Reflective Analysis Seminar

EDUC 9350 ***6 cr.***

This internship is designed to advance the development of self-directing educators who initiate, facilitate, participate in, and evaluate all aspects of educational practice. A year-long experience, the Internship offers an opportunity to practice communication skills and apply collaborative skills with one or more colleagues in the field. Through cooperative participation of school personnel, students are given the realm in which to plan, organize, and evaluate ways of improving instruction and to implement educational change through such peer leadership structures and practices as mentoring, collaborative supervision, peer coaching, and team teaching. All work is carried out under the supervision of faculty. Ongoing internship projects are analyzed during biweekly seminars..

Mentoring Internship: Program Design, Management, and Evaluation

EDUC 9360 ***3 cr.***

Practicum I/Early Childhood

EDUC 9400 ***3 cr.***

In this practicum experience students are assigned to cooperating schools for a period of student teaching.

Practicum II/Early Childhood

EDUC 9450 ***3 cr.***

In this practicum experience students are assigned to cooperating schools for a period of student teaching.

Practicum/Elementary

EDUC 9600 ***3 cr.***

In this practicum experience students are assigned to cooperating schools for a period of student teaching.

Practicum/Middle

EDUC 9700 ***3 cr.***

In this practicum experience students are assigned to cooperating schools for a period of student teaching.

Earth Science

New England's Glacial Landscape

ESCI 7100 ***3 cr.***

New England's topographic features were shaped during the last ice age which ended approximately 11,000 years ago. Students learn how glacial geologists study ice age clues to determine how local landforms were developed. Field trips are required with emphasis on site identification to glacial features.

Observational Astronomy

ESCI 7200 ***3 cr.***

This celestial survey course is aimed at providing both basic instruction and experience in viewing and recording the evening sky. Participants learn to set up, align, and use all types of basic telescopes; view constellations, planets, moon star clusters, nebula, galaxies, double stars, and variable stars of the fall and early winter sky; learn basic techniques for recording observations through the medium of sketching, photography, and CCD cameras. A substantial part of this course consists of field work located at instructor's observatory in a rural section of Fitchburg approximately ten minutes from the college. The remaining work consists of labs and analyses of data collected by participants. A project is required of all students.

Meteorology

ESCI 7300 ***3 cr.***

This is an introductory course in atmospheric meteorology, oceanography, and the space environment. Main topics of consideration are climatology and large-scale transient weather phenomena that affect the earth. Course curriculum includes background concepts in meteorology and a student project on a topic of current interest.

Oceanography

ESCI 7400 ***3 cr.***

This course examines the physical and chemical properties of sea water and their roles in the energy/nutrient cycles of marine ecosystems, the role of nutrient cycles and upwelling in fisheries locations, the fluid dynamics of oceanic circulations in both the surface and deep water regions, and the geology of the seabed, including plate tectonics (continental drift), marine sedimentation processes and coral reef formation and bleaching. Finally, a thorough study of the coastal geomorphic/

oceanic processes that shape the coastlines of the world via wave dynamics, coastal erosion, and erosion control techniques is explored.

Ecology

ESCI 7007 ***3 cr.***

The dynamic relationship between organisms and their environment is investigated in this survey of major ecological concepts and methodology. Field and laboratory work emphasize problem identification, formulation of hypothesis, data collection, and analysis and interpretation of results in terms of biological implications.

Advanced Methods of Teaching at the Secondary Level I

ESCI 7500 ***3 cr.***

See BIOL 7500 for course description.

Advanced Methods of Teaching at the Secondary Level II

ESCI 7550 ***3 cr.***

This course is a continuation of ESCI 7500.

Environmental Geology

ESCI 8100 ***3 cr***

A case studies approach that applies basic principles of geology to environmental problems as a result of such phenomena as earthquakes, volcanic eruptions, landslides, floods, groundwater, contamination, fossil fuels, and processing of natural resources.

Prerequisite: introduction to Geology or its equivalent.

Curriculum and Technology

ESCI 8250 ***3 cr.***

This course looks at the integration of educational technology in the classroom, and its relationship to learning theories. Mac and IBM computer hardware, and interfaces for classroom inquiry including video and microscope cameras, digital image capture, scanners, and computer projection panels are examined. Students learn similarities between standard software programs available for writing, computation, and data analysis. It includes a survey of software for studies, ranging from Encyclopedias on CD-ROM to programs that are specific to the study of various topics in science, art literature, math, and language. The class explores the use of the internet as a classroom resource, the hardware and software necessary to get on line, search engines, browsers, URLs, online journals, education web sites, online interest groups, and how to design a web page.

Curriculum Development and Design

ESCI 8260 ***3 cr.***

This course is designed to provide students with knowledge and skills of the curriculum development-revision process. In collaborative groups, students review, revise and expand the curriculum and assessment procedures in order to integrate current research findings and education reform initiatives. Students articulate a general Curriculum map contextually appropriate for grade-level content as they plan for integrating content with social, behavioral, processing, thinking skills and Curriculum frameworks. Students design an integrated 9-12th grade curriculum that aligns content standards across disciplines. Finally, interdisciplinary groups design an integrated curriculum unit.

Research in Education

ESCI 8500 ***3 cr.***

Research is carried out in a specific field of Education that involves an in-depth exploration of a well-defined problem. The student must develop a hypothesis for the possible solution to the problem; develop the experimental technique to test the hypothesis; and develop a logical conclusion based upon the data collected. The final product is a written documentation of the research and results. Each study is done under the supervision of graduate faculty.

Independent Study

ESCI 9100 ***3 cr.***

The content of these courses is designed by a student with the guidance of a faculty member to provide in-depth exposure to a topic for which no regular course is available.

Internship

ESCI 9500 ***6 cr.***

The Internship is a capstone experience allowing full integration and application of content knowledge and pedagogical theory and practice. Within the individual's classroom it incorporates all standards specific to the discipline in which certification is sought as well as all common standards for classroom teachers. A minimum of 400 clock hours or one full semester on-site under the auspices of the college is fulfilled. A research project is completed during the duration of the internship.

Educational Leadership and Management

Computer Application in Education

EDLM 7000 ***3 cr.***

This course is designed for teachers and administrators who have had little exposure to computers and data processing. Administrators learn to use the computer as a management tool, especially as it relates to fiscal and personnel matters. Through hands-on experience, participants become familiar with the equipment and learn how computers and systems work.

Politics of Education

EDLM 7005 ***3 cr.***

This course deals with the various processes that are utilized at the Federal, State, and Local levels to identify multilevel educational programs and priorities and to fund them. Students develop systematic knowledge about their political environment, acquire skills and strategies necessary to act on that knowledge, and attain principles that shape responsible political action. Guest speakers share their particular viewpoints in these areas.

Physical Plants and Transportation

EDLM 7010 ***3 cr.***

This course examines the challenges, problems, and activities related to new building programs, as well as the various aspects of phasing out old buildings; providing alternate uses; and redefining grade, curricula, and administrative organizational patterns.

Organizational Theory and Educational Planning

EDLM 7020 ***3 cr.***

This course explores the principles of school district organization and function In the context of the school district, students assess the individual and social needs, formulate direction setting purposes, and acquire model building and simulation techniques. Plant management and transportation issues are also addressed.

Introduction to Systems Approaches in Education

EDLM 7030 ***3 cr.***

The course provides a conceptual basis for systems approaches to administrative and leadership problems in education. Through cases and simulations students learn the application of such techniques. Needs assessment, planning, operational, and evaluative approaches are discussed and practiced.

Collective Bargaining in Education

EDLM 7040 ***3 cr.***

This course reviews the Federal and State statutes pertaining to collective bargaining in the public sector. Specific emphasis is placed on those statutes bearing on Massachusetts and its educational enterprises. Among the topics discussed and dissected are bargaining contracts, bargaining processes, and legal issues.

Topics

EDLM 7500 ***3 cr.***

Course content varies from semester to semester, reflecting contemporary issues in the discipline and depending upon student and faculty interest.

Managing Diversity

EDLM 7600 ***3 cr.***

This seminar focuses on cultural diversity in schools and on the growing challenges and opportunities diversity provides for educators. Emphasis is given to the unique regional cultural/linguistic demographics of diversity within a proactive perspective. Reflective readings and application strategies prepare the educational leader for rewarding multicultural communication and a commitment to effective management of diversity.

Community Relations

EDLM 8000 ***3 cr.***

Students learn communication techniques and acquire knowledge about political structures and regulations for improving a school and/or community. Individuals develop strategies for relations within their own community, utilizing specific goal-setting techniques. A review of current literature promotes an awareness of the diverse publics involved and suggests methods for dealing with and influencing perceptions about schools and their educational goals. A pre-practicum experience is included as an activity of this course.

Foundations of Educational Administration

EDLM 8005 ***3 cr.***

This introductory course is designed to provide an overview of school leadership focusing on the philosophical foundations of education; the psychological traditions of learning processes; the legal parameters of the school as an institution within the society; the cultural environment of urban, suburban, and rural educational settings; and educational trends as indicated by current research and pertinent literature.

Principles of Success for Practicing Administrators: Putting Plans into Action

EDLM 8006 ***3 cr.***

This course develops theory and practice behind the implementation of "Principle-Centered Leadership." The course is built around specific issues and needs of individuals who are fully employed as school administrators/directors. Topics covered include: communicating effectively, developing innovative action plans based on goals and vision, creating a support system that empowers others, and developing steps of program implementation within organization restrictions. Administrators practice sustaining action, problem solving, celebrating success, and measuring progress.

Human Resources and Personnel Administration

EDLM 8010 ***3 cr.***

This course focuses on establishing the rationale and organizational structure that supports effective human resource administration. Among the topics included in this course are staff selection, teacher induction, teacher tenure, promotion and dismissal, salary scheduling, policy making, relations with professional and non-professional personnel, and employee welfare. Emphasis is placed on the interpersonal dynamics of the educational enterprise as it relates to human resource management. Additionally, there is an exploration of issues involving, affirmative action, and concerns about the underrepresentation of minorities in teaching and administration.

Law for the Educator

EDLM 8020 ***3 cr.***

Constitutional and statutory provisions governing a public school system are examined on local, state, and national levels. A thorough review is made of the legal parameters surrounding the local level of the educational system. In addition, students inspect federal and state guidelines generated to meet the needs of diverse student populations in compliance with current judicial decisions and state legislation. The impact of precedent-setting cases is a major focus of this course.

Public School Finance

EDLM 8030 ***3 cr.***

This course addresses the fiscal and allocated functions of school administration. Students develop the skills and knowledge related to budgeting, accounting, and financing at the local, state, and federal levels. Resource acquisition and development of strategies for locating alternative revenue sources and, subsequently, allocating these resources efficiently and effectively are skills the student acquires.

Curriculum Leadership and Evaluation

EDLM 8040 ***3 cr.***

This course is designed for administrators who must become knowledgeable about curriculum development and program evaluation. The role of the administrator as a decision-maker and as an instructional leader is explored. Emphasis is placed on program development and evaluation, which reflects the various cultural and ethnic minority groups students represent. Additionally, practical applications of programs as well as the application of evaluation models and techniques are investigated. Prepracticum responsibilities are a part of this course.

Seminar: Research in Educational Leadership

EDLM 8050 ***3 cr.***

This course is designed to acquaint the student with the current research in Educational Administration and to teach the student how to evaluate the pertinence of this research to educational problems and issues. Students identify and use research sources and undertake projects that prepare them to address educational issues in an informed and lucid manner. Prepracticum responsibilities are a part of this course. This course may be taken in conjunction with the practicum EDLM 9110-9220.

Administration of Special Education Programs

EDLM 8800 ***3 cr.***

Service delivery models as they relate to legislation and the various types of handicapping conditions are presented in this course. Emphasis is given to services, organization programs, personnel, and facilities as they relate to the needs of the exceptional child and adult. As a result of this course students are expected to be well-versed in the effects of Federal and State mandates for special education services.

The Principal: Organization and Administration of the Elementary, Middle, and Secondary School

EDLM 9000 ***3 cr.***

This course addresses the role of the principal as an effective manager of schools at various levels of education. The focus is on the development of the human, conceptual, and technical skills required of decision-making, communication, planning and recruitment, scheduling, public relations, evaluating, and contract management. Course assignments reflect the specific level of interest of the participants (elementary, middle, and senior high schools). Nine semester hours of prerequisite core courses (excluding EDLM 91XX) are required.

Cases and Concepts in Educational Administration

EDLM 9010 ***3 cr.***

A case study approach is used to address problems and issues encountered in school administration. Current managerial concepts and strategies are used to explore alternative solutions to and methods of dealing with administrative problems and issues. This course is normally taken by students when all core courses have been completed in order to maximize their integration of administrative knowledge and skills.

Collegial Supervision

EDLM 9020 ***3 cr.***

The nature and function of supervision as it relates to both the teacher and the supervisor are studied. Also presented is a contemporary view of the concept of supervision from both a theoretical and practical perspective. The role of the "supervisor" is discussed as it has evolved from the traditional model to the instructional leadership model—a model that embraces collegiality and professional development. Included are strategies and processes related to a variety of supervisory models, e.g.: clinical supervision, mentoring, differentiated supervision, cooperative development, and self-directed development. Emphasis is on studying ways in which the planning, organization, and evaluation of instruction may be effectively improved through the cooperative participation of school personnel.

History of Higher Education

EDLM 9026 ***3 cr.***

The course explores the major development in American education from the seventeenth century to the present. Emphasis is placed upon aspects of European education and how it impacted higher education as we presently know it. The philosophical as well as historical aspects of the modern system and its evolution are covered.

Leadership Theory

EDLM 9030 ***3 cr.***

This course covers the entire Leadership Theory Movement from its inception to present day thinking. All aspects of the discipline are covered, including leadership theory, findings of leading scholars, leadership techniques, case studies associated with successes and failures, and application to a modern society.

Organizational Issues

EDLM 9040 ***3 cr.***

This course covers the role of the modern organization in a changing environment with emphasis on key organizational issues of importance.

College and University Teaching

EDLM 9050 ***3 cr.***

This course explores the history, philosophy, and objectives of teaching at all levels of higher education. The teaching and learning process is covered in depth with a special emphasis placed upon developing an understanding of the student, teacher, and the interaction required for effective learning.

Social Context

EDLM 9060 ***3 cr.***

This course covers social issues in higher education in a changing environment with emphasis on key current issues.

Strategic Planning in Higher Education

EDLM 9070 ***3 cr.***

This course is a comprehensive review of strategic planning for higher education. All functional areas of strategic planning are covered with emphasis on its relationship to marketing, management, and finance. The course utilizes case studies.

Practicum in Higher Education Administration

EDLM 9080 ***6 cr.***

The practicum/internship position for the enrolled student provides all of the necessary experience for a particular position in administration. The experience is supervised by an experienced faculty member. The timing coincides with an academic semester. Specific educational outcomes are developed by the student with assistance from a designated faculty member. A total of 300 hours are required for the semester.

Independent Study

EDLM 9090 ***3 cr.***

This course utilizes a conference approach with an individual student placing emphasis on critical thinking, refinement of research skills, and ability to pursue topics independently. In some exceptional cases, students are permitted to utilize this course in lieu of core or specialization track courses due to completion time constraints or lack of course offerings. *Prerequisite: permission of Advisor only.*

The Dynamics of Planned Change

EDLM 9100 ***3 cr.***

A study of planned change, essentially aimed at education, includes a review and analysis of sociological and psychological factors inherent in the change process. Topics reviewed include organizational behavior, intervention theory, intergroup relations, and management techniques.

A Practicum in Educational Leadership and Management

EDLM 9110/9220 ***6 cr.***

The culminating course in the Master's Degree program consists of an internship experience under the direct supervision of a principal and/or director. The graduate student is obliged to work in a school setting performing the kinds of responsibilities and duties for which he/she is preparing, i.e. principal—supervisor/director. The practicum can be arranged for full-time or part-time. Students must discuss proposed arrangements with their advisor early in their program. During the practicum, students meet with their college advisor and are visited at their practicum site. This practicum consists of a minimum of 150 clock hours earned at the practicum site.

Clinical Experience in Educational Leadership and Management

EDLM 9221 ***6 cr.***

The clinical experience is in the role and at the level of the certificate sought. It integrates content area knowledge, pedagogical theory, and practice. A clinical experience requires a minimum of 400 clock hours or one full semester as defined by the field site. Clinical experiences are fulfilled either under the auspices of a college or university, in which case supervision and evaluation are the responsibility of the college or university, or under the auspices of a school system authorized by the Bureau as a clinical experience site, in which case supervision and evaluation are the responsibility of the school system. Evaluation of all clinical experiences are based on the appropriate standards for the Administrative Certificate being sought.

Thesis

EDLM 9500 ***3 cr***

The thesis is undertaken by students who are not seeking certification and in lieu of the practicum/internship in the Education Leadership and Management Program. (See Thesis description in the Education Leadership and Management program description).

Educational Technology

Impact of Technology on Education

ETEC 7600 ***3 cr.***

This course includes content related to the impact of technology on education, especially as it relates to effective teaching and curriculum development. The use of technology as a change agent in schools is explored. Students are exposed to the variety of technologies used in schools.

A Graphics Approach to Technology

ETEC 7700 ***3 cr.***

This course explores the integration of visual learning and computers. Students explore the use of paint programs, hyperstudio, videos, and interactive videos. The MacIntosh computer's approach to software (pull down menus and use of the mouse) is investigated.

Using the Computer as a Tool for Thinking Skills

ETEC 7800 ***3 cr.***

This course integrates critical thinking skills and computers. Students explore the use of problem solving software, Logo, and Logo Writer. By using the computer as a tool for conducting research students are enabled to look at CD ROM, Database Applications, Hypercard, and Telecommunications.

Topics

ETEC 8000 ***3 cr.***

Course content varies from semester to semester, reflecting contemporary issues in the discipline and depending upon student and faculty interest.

Computers and Writing

ETEC 8600 ***3 cr.***

This course provides teachers and administrators, at all levels and in all subject areas, with strategies for developing and implementing a computer-assisted process writing program in their classrooms and schools. Participants examine the process of writing (idea generating, drafting, responding, revising, editing, and publishing) and are introduced to ways of using the computer to facilitate writing growth at each stage. Working with current writing software programs, editing tools, and desktop publishing packages, participants devise a computer-assisted writing program for their own classrooms and schools. Previous computer experience is not required.

Seminar in Educational Technology

ETEC 9100 ***3 cr.***

Students have the opportunity to examine, in depth, current issues and future directions in educational technology. Discussions and readings focus on the relationship between the computer and teaching methodologies, as well as teacher effectiveness and curricula.

Project in Educational Technology

ETEC 9200 ***3 cr.***

Completion of a comprehensive project utilizing educational technology in elementary education, special education, or secondary education is required. The projects developed and implemented are evaluated by a review board of classmates and faculty.

English

Children's Literature

ENGL 7010 **3 cr.**

Students in this class study the content of classic and contemporary children's literature plus various approaches for interpreting and teaching a wide variety of children's texts. Close attention is paid to emerging trends in children's literature as well as to the literature's enduring concerns.

Advanced Methods of Teaching at the Secondary Level I

ENGL 7500 **3 cr.**

See BIOL 7500 for course description.

Advanced Methods of Teaching at the Secondary Level II

ENGL 7550 **3 cr.**

The course is a continuation of ENGL 7500.

Creative Writing

ENGL 8020 **3 cr.**

This course facilitates the writing of poetry and short fiction in a workshop atmosphere.

The Robert Cormier Collection

ENGL 8035 **3 cr.**

This course is a study of the writings of Robert Cormier, the internationally acclaimed Leominster author, using materials in the Robert Cormier Manuscript Collection at Fitchburg State College. *The Chocolate War, I Am the Cheese, After the First Death, Fade, We All Fall Down, Tenderness*, and other works by Cormier are studied.

Theories and Principles of Language Learning

ENGL 8040 **3 cr.**

This course provides teachers of multilingual students with a theoretical background for the teaching and learning of languages. It introduces research into second language acquisition from perspectives of the fields of linguistics, psychology, and education. Topics included in the course are language acquisition; learning styles and strategies; effects of personality, age, motivation, and sociological factors; and the role of the first language. Discussions explore the relationship of theory to methodology and classroom practice.

Methods and Materials in ESL

ENGL 8042 **3 cr.**

The major methodological approaches to teaching English as a Second Language (ESL), including a historical survey and a review of current applications, are explored in this course. The following topics are discussed: interactive, communicative classroom practices; teaching reading, writing, listening, oral communication, grammar, and vocabulary; testing; designing and evaluating classroom materials.

Graduate Study and Research in English

ENGL 8050 **3 cr.**

This course is designed for students who are new to the English Graduate program. It exposes students to a range of subjects in the field. The course promotes the student's ability to do independent and creative scholarly research and to become more competent in critical approaches to literature, research techniques, new methodologies, and technologies, as well as library and archival examination.

Literature in the Classroom: Readers, Texts, and Teachers

ENGL 8070 **3 cr.**

This course examines the place of literature in today's middle and secondary school classrooms. Using the Standards for the English Language Arts (NCTE and IRA), and the Massachusetts English Language Arts Curriculum Framework as guides, students consider the choice of classic and contemporary literature for whole class and individual reading, strategies for creating responsive and reflective readers, and various means of assessing student performance. The impact of new media and electronic technology on our thinking about literature, literature instruction, and the way people read is also explored.

Literature for Young Adults

ENGL 8071 **3 cr.**

The course is a survey of current books written for middle school, junior high, and high school students as well as a study of strategies for teaching them. The emphasis is on new books available in paperback that are suitable for classroom use or recreational reading. This course's multimedia web page provides support materials as well as a means to share responses and teaching ideas. Strategies for encouraging student engagement with literature, for pairing young adult novels with the classics, and for sharing responses are modeled by the professor and evaluated by students. There are opportunities for students to develop teaching materials for use in their own classroom as well as to become contributors to the *Reader's Review of Young Adult Literature*.

Computers and Writing

ENGL 8073 **3 cr.**

This course provides teachers and administrators, at all levels and in all subject areas, with strategies for developing and implementing a computer-assisted process writing program in their classrooms and schools. Participants examine the process of writing (idea generating, drafting, responding, revising, editing, and publishing) and are introduced to ways of using the computer to facilitate writing growth at each stage. Working with current writing software programs, editing tools, and desktop publishing packages, participants devise a computer-assisted writing program for their own classrooms and schools. Previous computer experience is not required.

Process Writing Across the Curriculum

ENGL 8076 **3 cr.**

Writing across the curriculum provides learners with the opportunity to investigate their own thinking as they go beyond the surface level of text or subject matter to arrive at meaningful connections and insights. Students investigate creative approaches to introduce current research journals into such areas as portfolios, audience, persona, and assessment. Working independently and in cooperative learning groups, participants immerse themselves in the reading/writing/thinking process, create their own portfolios, design mini-lessons, conduct research, and share their learning and thinking.

Literature and Film

ENGL 8085 ***3 cr.***

This is an introduction to the relationship between literature and film through the critical study of each medium. Special consideration is given to matters of characterization, narration, plot, setting, theme, and tone in written works and films. Students are introduced to conventions of the documentary and fictional film, principles of scriptwriting, and the elements of formal screen production.

Practicum

ENGL 8090 ***6 cr.***

Student teaching experience is offered to give practical classroom experience to those degree students who have not satisfied the state requirements for certification.

Curriculum and Technology

ENGL 8250 ***3 cr.***

This course looks at the integration of educational technology in the classroom, and its relationship to learning theories. Mac and IBM computer hardware, and interfaces for classroom inquiry including video and microscope cameras, digital image capture, scanners, and computer projection panels are examined. Students learn similarities between standard software programs available for writing, computation, and data analysis. It includes a survey of software for studies, ranging from Encyclopedias on CD-ROM to programs that are specific to the study of various topics in science, art literature, math, and language. The class explores the use of the internet as a classroom resource, the hardware and software necessary to get on line, search engines, browsers, URLs, online journals, education web sites, online interest groups, and how to design a web page.

Curriculum Development and Design

ENGL 8260 ***3 cr.***

This course is designed to provide students with knowledge and skills of the curriculum development-revision process. In collaborative groups, students review, revise and expand the curriculum and assessment procedures in order to integrate current research findings and education reform initiatives. Students articulate a general Curriculum map contextually appropriate for grade-level content as they plan for integrating content with social, behavioral, processing, thinking skills and Curriculum frameworks. Students design an integrated 9-12th grade curriculum that aligns content standards across disciplines. Finally, interdisciplinary groups design an integrated curriculum unit.

Literary Theory: Finding and Defining Texts

ENGL 9000 ***3 cr.***

The course surveys theories of literature with emphasis on contemporary (re)visions of various canons of literature. Study includes a brief historical survey, but focuses on such contemporary practices as New Historicism, feminist theory, and reader response criticism. Practical applications in the classroom and in one's own reading (for example, designing a curriculum, reading multicultural materials, and seeing the classics anew) guide class discussion.

The Literature of the Middle Ages

ENGL 9011 ***3 cr.***

The course surveys selected texts from the Middle Ages, starting with Beowulf and Old English lyrics, and including representative Middle English, Celtic, Anglo-Norman, and French works. Various genres are covered, including epic, lyric, drama, Arthurian romance, legend, religious verse, and satire. All works except the Middle English are read in translation.

Shakespeare's Major Plays

ENGL 9020 ***3 cr.***

The course consists of studies in comedy, tragedy, and romance. Among the plays studied are Romeo and Juliet, Julius Caesar, King Lear, Hamlet, Othello, Twelfth Night, A Midsummer Night's Dream, and The Tempest.

Revisiting the Romantics

ENGL 9035 ***3 cr.***

This course emphasizes the work of romantic era writers (1780-1830). Students examine the key aesthetic and political debates of the time through an analysis of essays, poetry, novels, and plays. Authors include such writers as Mary Wollstonecraft, Mary Shelley, William Godwin, and Dorothy and William Wordsworth.

The Quiet Revolution: Nineteenth-Century American Women Writers

ENGL 9036 ***3 cr.***

This course considers texts written by the "d----d mob of scribbling women," including Matilda Joslin Gage, Sarah Orne Jewett, Harriet Jacobs, Harriet Beecher Stowe, Ida B. Wells and others. Students learn how these women used essays, magazine and newspaper columns, novels, short stories, and slave narratives as a public forum for discussing issues of the day, which included sexism, racism, and the reform of labor, marriage, property, voting, and education.

American Renaissance: Poe, Hawthorne, Thoreau, Melville

ENGL 9037 ***3 cr.***

By studying literature from the middle of the nineteenth century, students discover how science replaced religion as the dominant mode of perceiving and interpreting the natural world. A careful reading of the major imaginative literature by writers such as Poe, Hawthorne, Thoreau, and Melville reveals how a new kind of symbol was developed to interpret nature in the "new" way.

Mark Twain and American Humor

ENGL 9040 ***3 cr.***

This course explores Southwestern humor leading up to the writings and career of Mark Twain. The humorists who share the Twain legacy are also studied.

American Art and Literature 1800-1860

ENGL 9046 ***3 cr.***

This course explores the relationship between the plastic art and the literary art of the new nation. Students learn to identify the forces that inspired imaginative production in both art forms during the period that attempted to define the "American" style. Slides of paintings as well as literary texts are studied.

Women in European Literature

ENGL 9047 ***3 cr.***

At the center of this course are texts by women authors from various European countries written during the eighteenth through the twentieth centuries. Students consider the kinds of writings published by women, the audiences women wrote for, their motivations for writing, and the accessibility or popularity of their writings. Close analysis and discussion of individual texts lead students to consider variations of these factors between countries and time periods.

Multicultural Children's Literature

ENGL 9048 ***3 cr.***

This course focuses on contemporary multicultural children's literature and requires students to learn and apply appropriate interpretive strategies for understanding the texts and cultural contexts. Students gain and demonstrate a firm understanding of the major critical issues regarding multicultural children's literature and formulate and support personal responses to these issues.

The World Novel to 1914

ENGL 9049 ***3 cr.***

This course examines significant novels outside the American/English literary canon representing the development of the form. Authors selected include comic (Soseki), romantic (Sand), realist (Balzac, Flaubert), and psychological (de Assis, Micha'lis). Students explore the historical, cultural, political, and social milieu that shaped each writer and text.

20th-Century British and American Poetry

ENGL 9052 ***3 cr.***

This seminar explores the works of poets such as Auden, H.D., Lowell, Plath, Roethke, Kinnell, Rich, Heaney, Bishop, Walcott, and Hughes. Students make presentations on assigned topics. Attendance at live and filmed poetry readings is a feature of the course.

Modern Irish Literature

ENGL 9055 ***3 cr.***

This seminar concentrates on two of the following three groupings: major works by three Irish poets such as Yeats, Heaney, Muldoon; major works by three Irish fiction writers such as Joyce, O'Connor, O'Faolain; major works by three Irish playwrights such as Synge, O'Casey, Friel.

Contemporary World Literature

ENGL 9058 ***3 cr.***

Particular emphasis in this course is placed on authors who write to effect changes in our perceptions of "the other" so we may understand "the otherness" of ourselves. Authors studied include: Conrad, Forster, Achebe, Gordimer, Fugard, et al.

The Shapes of Modern Drama

ENGL 9059 ***3 cr.***

In this seminar students read plays from such traditions as the realist, the symbolist, and the expressionist, including works by Yeats, Pirandello, Beckett, Pinter, and Mamet.

Women Writers Around the World: Stories of Maturation and Initiation

ENGL 9060 ***3 cr.***

Students take a global approach to women's stories of growing up found in autobiographies, novels, short stories, and poetry. An invigorating exploration, this course includes works by authors such as Toni Cade Bambara, Nawal El Saadawi, bell hooks, Clarice Lispector, Anchee Min, Georgina Valoyce Sanches, Esmeralda Santiago, Leslie Marmon Silko, Jeanette Winterson, and Banana Yoshimoto. Much of this literature is appropriate for use in the high school classroom.

Africa Through the Novel

ENGL 9061 ***3 cr.***

Students read, examine, and discuss texts by African writers who have (re)constructed, in their imaginary worlds, specific and multiple visions of African life. All texts were written in the twentieth century, although some portray periods prior to that time. Emphasis is on characteristics of style, politics, and culture evoked in these works and aspects of contemporary literary theory pertaining to African literature today.

Three American Literatures: Native American, African American, and Asian American

ENGL 9064 ***3 cr.***

The focus of this course is on relationships between culture and society as works by three groups of Americans are considered against historical, ethnic, and cultural backgrounds. Discussion may concern questions of identity, family, initiation, politics and ideology, education, gender, aggression, and violence. Special attention is paid to the novel as a popular art form in aesthetic and social terms.

Women in Contemporary Society

ENGL 9065 ***3 cr.***

Women as a force in society are the focus of this cross-discipline course. The political, social, and economic issues concerning women are subjects for student research. Areas explored include anthropology, business, education, history, literature, philosophy, psychology, sociology, science, and the arts. Students also consider the role of cultural diversity (both nationally and internationally) in the scholarship of women.

Topics Course

ENGL 9075 ***3 cr.***

Course content varies from semester to semester, reflecting contemporary issues in the discipline and depending upon student and faculty interest.

Independent Study

ENGL 9080 ***3 cr.***

Independent study provides special individualized study under close supervision for students excelling in scholarship.

Internship

ENGL 9500 ***6 cr.***

The Internship is a clinical, capstone experience allowing full integration and application of content knowledge and pedagogical theory and practice. It should incorporate all standards specific to the discipline in which certification is sought as well as all common standards for classroom teachers (section 7.04). Students must fulfill a minimum of 400 clock hours or one full semester on site under the auspices of the college.

History

From Weimar to Hitler: Germany 1918-1945

HIST 7010 ***3 cr.***

This class, run as a seminar with joint student/faculty leadership, traces the developments that led to the collapse of the Weimar Republic and the National Socialist acquisition of power in Germany. Issues covered include social and economic trauma after the First World War, the relationship between state and society in the Weimar Republic, political fragmentation, the reaction against modernist culture, the National Socialist power, everyday life in National Socialist Society, women and National Socialism, racist ideology, and extermination.

The Vietnam War and U.S. Society

HIST 7020 ***3 cr.***

This course is designed to educate and prepare students about the war in Vietnam and its effects on U.S. society. Topics include: the history and culture of Vietnam before U.S. involvement; historical coverage of U.S. diplomatic involvement in Vietnam; the military aspects of the war; various components of the Vietnamese internal struggle, including the North and South Vietnamese Armies and the National Liberation Front (the Viet Cong); the effect on the U.S. military at home and abroad; the anti-war movement; the effect of the war on the various presidencies (Eisenhower, Kennedy, Johnson, Nixon and Ford); the war and the Civil Rights and the women's movement; and the cultural expressions of the war, from anti-war songs to current films like "Platoon" and "Apocalypse Now." The course is grounded in an historical approach and also uses literature, film, and music.

The U.S. Women's Rights Movement Since 1820

HIST 7150 ***3 cr.***

The class, run as a seminar with joint student/faculty leadership, traces the development of the women's rights movement from its roots in the abolitionist movement to its present status in the feminist movement. Issues covered are abolitionism, woman suffrage, temperance, labor, peace, reproductive rights, and general rights. Students investigate issues, ideologies, strategies, tactics, and personalities. Research involves biographies, organizational histories and/or analysis of political theories and strategies. The course provides students with the knowledge to incorporate new teaching materials about women's history into U.S. History courses and to gain a broader understanding of women as actors in U.S. politics.

Beyond Antiques: Artifacts and History

HIST 7200 ***3 cr.***

This graduate seminar examines many different forms of North American material culture—personal and domestic artifacts, buildings, and historic landscapes—to see what they can tell us about life in the past. Through a combination of readings, object studies, and field trips, students survey different modes of investigation: social and cultural history, history of technology, cultural geography, historical archaeology, folklife studies, art history, and decorative arts studies. The seminar tests the applicability of these disciplines, methods, and theories to specific spheres of activity and thought, including community, class, work, house and household, clothing, dining, landscape, and play.

Judaism and Christianity (300 BC to 500 CE)

HIST 7250 ***3 cr.***

This course offers an overview of the formative period of development of Judaism and Christianity from 300 BCE to 500 CE in which both struggled with many competing movements which will be examined. Causes and conditions for the Christian split off from Judaism and it's process in becoming the single most powerful religious movement in Europe will be approached from the ***social*** developments in many regional centers using archeology and social histories of indigenous peoples. Primary readings in texts of the period (translated into English) as well as secondary literature in archeology and history will provide vantage points to examine various aspects of social unrest, competition among ethnic minorities and factors contributing to the economic dissolution of the Roman Empire.

Middle East History

HIST 7260 ***3 cr.***

This course offers an overview of Middle Eastern History from its beginnings to the present. The course explores religion, politics, social institutions and gender history of Muslim civilizations as its expansion and confrontation with other civilizations sharpened its own self-image. . The methodology of this course is interdisciplinary, including archeology, comparative literature, cultural and social history, and religious studies. Particular attention will be paid to the countries of the Middle East as they developed after World War I and how the various coalitions of the Arab nations were formed in response to Western European interventions. Emphasis will be placed on international politics and the hidden agendas involving defense, oil, economics, and security between Western Europe and the Middle Eastern alliances.

Amerindian History

HIST 7270 ***3 cr.***

This course provides an overview of Amerindian history from the earliest settlement through the nineteenth century. The course explores religion, politics, social institutions, and gender history of Amerindian cultures. The methodology of this course is interdisciplinary, including archeology, linguistics and comparative literature, cultural and social history and religious studies. We shall examine the social reasons for the first migrations and local developments in many regional areas using archeology and social histories of various archeological cultures and historic tribes.

Irish History

HIST 7280 ***3 cr.***

This course examines the history of Ireland from its beginnings to the present. It focuses on the cultural history of Ireland as it evolved through a series of waves of immigration since ancient times, which created new cultural mixes and confrontations. The course explores religions, social and political institutions and gender history of this island, which provided a haven for a variety of immigrants from ancient times. The methodology of this course is interdisciplinary, including archeology, comparative cultural and social history, and religious studies. We shall examine the diversity of Irish social and cultural origins and investigate how these contribute to the formation of an Irish identity. The story of competing mores will be examined in the tensions, which are apparent in the modern history of Ireland today.

Modern Russia: Rebirth and Renewal

HIST 7300 ***3 cr.***

The course is a survey of several major historiographical problems in modern Russian history from the reign of Peter the Great through the revolutions of the 20th century. Emphasis is given to cultural and political history and the reading of Russian historical literature (in English).

Historiography

HIST 7450 ***3 cr.***

Historiography or the historian's craft is addressed by considering how a historian discovers facts and formulates them into hypotheses; how the historian's craft has changed over the course of time; and how different historians handle the same era or subject matter. The course enables students to read a piece of secondary source writing and analyze the author's perspective and biases; analyze and understand a primary source document; write a paper using primary source material; understand historians' work within their own historical era; appreciate the subjective as well as objective nature of historical research.

In any particular semester, the instructor chooses one of two forms for the course : a) a survey and analysis of various historians' work; their approaches and their tools, or b) a study of historians' methods and a research paper based on primary source research putting these methods into use.

Advanced Methods of Teaching at the Secondary Level I

HIST 7500 ***3 cr.***

See BIOL 7500 for course description.

Advanced Methods of Teaching at the Secondary Level II

HIST 7550 ***3 cr.***

The course is a continuation of HIST 7500.

Practicum

HIST 8090 ***1-6 cr.***

Student teaching experience is offered to give practical classroom experience to those degree students who have not satisfied the state requirements for certification.

Curriculum and Technology

HIST 8250 ***3 cr.***

This course looks at the integration of educational technology in the classroom, and its relationship to learning theories. Mac and IBM computer hardware, and interfaces for classroom inquiry including video and microscope cameras, digital image capture, scanners, and computer projection panels are examined. Students learn similarities between standard software programs available for writing, computation, and data analysis. It includes a survey of software for studies, ranging from Encyclopedias on CD-ROM to programs that are specific to the study of various topics in science, art literature, math, and language. The class explores the use of the internet as a classroom resource, the hardware and software necessary to get on line, search engines, browsers, URLs, online journals, education web sites, online interest groups, and how to design a web page.

Curriculum Development and Design

HIST 8260 ***3 cr.***

This course is designed to provide students with knowledge and skills of the curriculum development-revision process. In collaborative groups, students review, revise and expand the curriculum and assessment procedures in order to integrate current research findings and education reform initiatives. Students articulate a general Curriculum map contextually appropriate for grade-level content as they plan for integrating content with social, behavioral, processing, thinking skills and Curriculum frameworks. Students design an integrated 9-12th grade curriculum that aligns content standards across disciplines. Finally, interdisciplinary groups design an integrated curriculum unit.

Topics in History

HIST 9000 ***3 cr.***

Course content varies from semester to semester, reflecting contemporary issues in the discipline and depending upon student and faculty interest.

Internship

HIST 9500 ***6 cr.***

The Internship is a clinical, capstone experience allowing full integration and application of content knowledge and pedagogical theory and practice. It incorporates all standards specific to the discipline in which certification is sought as well as all common standards for classroom teachers. Students must fulfill a minimum of 400 clock hours or one full semester on site under the auspices of the college.

Interdisciplinary Studies

Women in Contemporary Society

IDIS 9065 ***3 cr.***

This course is an introductory graduate level course on issues of concern to women. The class examines women's economic, social, and political roles in society. Ethnic diversity and international comparisons are also discussed.

Seminar and Internship in Interdisciplinary Studies

IDIS 9400 ***6 cr.***

The Internship is a capstone experience allowing full integration and application of content knowledge and pedagogical theory and practice. Students must fulfill a minimum of 400 clock hours or one full semester on site under the auspices of the college.

Seminar and Graduate Thesis

IDIS 9500 ***6 cr.***

Students meet the requirements of the Graduate Division's Thesis Program. In order to complete this phase of the program, a faculty committee is to be established by the student under the guidance and supervision of the graduate advisor.

Note: See thesis description under Program of Study section of the Interdisciplinary Studies Program Description.

Management

Quantitative Methods for Business

MGMT 7001 ***3 cr.***

The course provides an overview for students with a limited quantitative background. The focuses is on statistics and includes algebra and an introduction to calculus. Topics include: sample distribution, confidence intervals, hypothesis testing, analysis of variances, derivatives, logs, linear programming, and regression analysis.

Accounting for Graduate Students

MGMT 7002 ***3 cr.***

The course provides an intensive study of financial and managerial accounting for students with no previous background in accounting. Topics include: collection, reporting, and interpreting of financial information and statements, break even analysis, budgets, manufacturing and standard costing, and variance analysis.

International Business

MGMT 9002 ***3 cr.***

The course provides students with the background to understand global strategic business problems; demands and pressures from governments, unions, consumers, and others in foreign countries as well as from domestic stockholders. Studies emphasize U.S. control of multinational and foreign companies and the effect upon international competition.

Quality Management Theory

MGMT 9008 ***3 cr.***

This course studies the concepts, practices, and methods of modern quality management in both manufacturing and services. Topics include: history, concepts, dimensions of quality, measurement and control, statistical quality control, information systems, and auditing for quality.

Prerequisite: BSAD 3200.

Managerial Economics

MGMT 9020 ***3 cr.***

This course presents the principles, concepts, and tools of economic analysis that are necessary for proper management planning. Its aim is to improve the understanding of how a market economy operates and to familiarize students with the tools that are useful in making economic decisions and in solving economic problems.

Prerequisites: BSAD 2110, ECON 1200.

Accounting Theory

MGMT 9030 ***3 cr.***

The course develops an understanding of the theories and concepts which provide the foundation for accounting.

Prerequisite: admission to Accounting Track or 24 undergraduate credits in Accounting.

Advanced Financial Accounting Issues

MGMT 9032 ***3 cr.***

This course affords students the opportunity to examine current issues including ethics, accounting and auditing research techniques, international accounting issues, and other relevant current topics.

Prerequisite: admission to Accounting Track or 24 undergraduate credits in Accounting.

Selected Topics in Advanced Managerial Accounting

MGMT 9034 ***3 cr.***

Students are introduced to issues in the current environment, such as international influences on U.S. management practices, business ethics, and technology changes and their impact on the managerial structure through a series of readings and cases.

Prerequisite: admission to Accounting Track or 24 undergraduate credits in Accounting.

Accounting Information Systems

MGMT 9036 ***3 cr.***

This course integrates the accounting process into the total information system. Students analyze the problems involved in the design and installation of information systems, including computer feasibility studies and systematizing the clerical functions of an organization. Course material describes the inter-relationship of internal controls, classification of accounts and functions, and reporting to provide relevant information and yet optimize the control function.

Prerequisites: BSAD 1700, MGMT 7002.

Organizational Behavior and Development

MGMT 9040 ***3 cr.***

This course relates the knowledge of human behavior to the problems of organizational life. It examines individual behavior as well as group and social behavior in organizations. The course encourages discussion of the methods of changing behavior through organizational development.

Prerequisite: BSAD 3200.

Management of Human Resources

MGMT 9050 ***3 cr.***

This course provides knowledge of the human resource from the manager's perspective. The student develops an understanding of the role of personnel specialists. Topics covered include: job analysis, employee selection, training, appraisal, promotion, and discipline within the context of recent legal developments.

Prerequisite: BSAD 3200.

Management Information Systems

MGMT 9060 ***3 cr.***

This course provides insight into the problem of identifying an organization's informational requirements to facilitate the decision-making process. Topics presented include: an analysis of information systems, communication theory, information flow, methods and procedures for gathering, disseminating, and controlling information.

Prerequisite: BSAD 1700.

Legal Issues in Human Resources Management

MGMT 9070 ***3 cr.***

This course is designed to provide human resources professionals and other managerial professionals with an understanding of labor and employment law, the sources of this law and how they may apply in the employment setting.

Management Theory and Process

MGMT 9080 ***3 cr.***

This course examines management theory as an evolving body of knowledge influencing managerial practices. Management theories are compared and contrasted with the goal of understanding the assumptions and applications of each. Within the context of theoretical models, attention is directed to the differences in the environment in which firms must operate.

Prerequisite: BSAD 3200.

Production and Operations Management

MGMT 9090 ***3 cr.***

The course covers system design and layout, job design and work methods, plant location and product development, scheduling and methods of control. The quantitative management techniques of capital budgeting, forecasting inventory methods, program evaluation review techniques (PERT), and decision theory are utilized.

Prerequisite: BSAD 3200.

Business and Society

MGMT 9100 ***3 cr.***

The course studies the various external environmental factors which affect managerial decisions. The course views the environment as a complex set of interrelated economic, legal, political, social, and cultural influences, which impact the organization through its public or constituencies. Through case analysis the student gains insight into the complicated interrelationships that exist between the organization and its environment.

Prerequisites: BSAD 3500, ECON 1200.

Legal Environment of Business

MGMT 9130 ***3 cr.***

This course considers the legal questions arising out of doing business nationally and internationally. It is a study of the interrelationships among laws as they affect individuals and business organizations. The course provides the student with an awareness of how legal problems and their solutions can influence the direction of a business.

Prerequisite: BSAD 3500.

Marketing Management

MGMT 9160 ***3 cr.***

The course embarks on a detailed study of concepts and procedural alternatives in the delineation of the market target. In addition, the course covers the development and implementation of the marketing mix and the control and analysis of the total marketing effort.

Prerequisite: BSAD 3300.

Corporate Finance

MGMT 9170 ***3 cr.***

The course examines principles of decision analysis in management of current assets, estimation of requirements for short term funds, and valuation of capital budgeting and merger proposals.

Prerequisite: BSAD 3400, MGMT 7001, MGMT 7002.

Accounting Practices for Managers

MGMT 9180 ***3 cr.***

The course provides a study of financial reporting systems. Emphasis is given to the interpretation and uses of information contained in financial reports.

Prerequisite: MGMT 7002.

Financial Analysis

MGMT 9310 ***3 cr.***

This course provides for an intensive examination of financial accounting theory and practice. It includes the valuation of assets and liabilities, accounting for stockholders' equity, measurement and reporting of earnings, the flow of funds, an investigation of the evolution and current status of accounting theory and financial reporting.

Prerequisites: MGMT 9170, MGMT 9180.

Labor Management

MGMT 9320 ***3 cr.***

This course analyzes the development and impact of collective bargaining on the work force and the organization. Consideration is given to public policy as well as environmental forces. The negotiation and administration of labor agreements is covered.

Prerequisite: MGMT 9080.

Marketing Communications

MGMT 9330 ***3 cr.***

This course presents the elements in the marketing mix that deal with the promotion of goods or services. The course covers advertising, sales promotion, public relations, and publicity. The characteristics of each form of promotion are evaluated with respect to varying market situations. The focus of the course is on the managerial aspects of communication design, development, implementation, and appraisal.

Prerequisite: MGMT 9160.

Selected Topics in Management

MGMT 9450 ***3 cr.***

This course emphasizes trends, current research, and contemporary problems in management. Students research, discuss, and present reports on problems in management. (Course may be repeated twice with different topics with approval of chair. MBA Graduate Committee.)

Prerequisite: core requirements.

Business Policy

MGMT 3500 ***3 cr.***

This course provides a study of administrative processes dealing with the formulation of policy. Topics covered include strategy formulation, the role of the general manager, and the design of strategic planning systems. Attention is focused on problem identification, problem solving and decision-making. Extensive examination is made of cases involving a variety of institutions in both the public and private sectors.

Prerequisite: at least 21 graduate hours completed or permission of Chair.

Mathematics

Number Theory

MATH 7000 ***3 cr.***

A formal study of the classical theory of numbers including such topics as divisibility, primes, congruency, Diophantine equations, number theoretic functions, and quadratic reciprocity.

Technology in the Classroom

MATH 7100 ***3 cr.***

A study of the various ways in which technology can be used in the K-12 classroom. Students will perform and develop lessons based on calculators, graphing calculators, computer graphing and algebra software (e.g.: Mathematica, Zap-A-Graph, Geometer's Sketchpad), and become familiar with the uses of the Internet in the K-12 setting.

History of Mathematics

MATH 7200 ***3 cr.***

The development of mathematical ideas, from ancient to modern times and their relevance for other fields of knowledge. Special attention is given to several of the most important original writings in mathematics.

Geometry

MATH 7300 ***3 cr.***

A formal study of basic and advanced concepts of Euclidean, nonEuclidean and projective geometry.

Mathematical Modeling

MATH 7400 ***3 cr.***

The designs of mathematical models for solving problems in the physical, social, and life sciences. Emphasis is on the use of mathematics in such problems as traffic flow, group decision making and queuing.

Discrete Algebraic Structure

MATH 7450 ***3 cr.***

A study of discrete algebraic structures. Topics include: Set theory, Boolean algebra, partial orders, equivalence relations, recursions, functions, graph theory, finite automata and combinatorics.

Advanced Methods of Teaching at the Secondary Level I

MATH 7500 ***3 cr.***

See BIOL 7500 for course description.

Advanced Methods of Teaching at the Secondary Level II

MATH 7550 ***3 cr.***

See BIOL 7550 for course description.

Practicum

MATH 8090 ***3 cr.***

See BIOL 8090 for course description.

Analysis

MATH 8100 ***3 cr.***

A careful development of the core analysis topics of limit, continuity, differentiation, integration, and sequences and series. Both the real number setting and the complex numbers will be considered.

Probability

MATH 8200 ***3 cr.***

Topics include discrete and continuous random variables, expectations, variance, covariance, probability density functions, movement generating functions, and classical probability distributions.

Curriculum and Technology

MATH 8250 ***3 cr.***

This course looks at the integration of educational technology in the classroom, and its relationship to learning theories. Mac and IBM computer hardware, and interfaces for classroom inquiry including video and microscope cameras, digital image capture, scanners, and computer projection panels are examined. Students learn similarities between standard software programs available for writing, computation, and data analysis. It includes a survey of software for studies, ranging from Encyclopedias on CD-ROM to programs that are specific to the study of various topics in science, art literature, math, and language. The class explores the use of the internet as a classroom resource, the hardware and software necessary to get on line, search engines, browsers, URLs, online journals, education web sites, online interest groups, and how to design a web page.

Curriculum Development and Design

MATH 8260 ***3 cr.***

This course is designed to provide students with knowledge and skills of the curriculum development-revision process. In collaborative groups, students review, revise and expand the curriculum and assessment procedures in order to integrate current research findings and education reform initiatives. Students articulate a general Curriculum map contextually appropriate for grade-level content as they plan for integrating content with social, behavioral, processing, thinking skills and Curriculum frameworks. Students design an integrated 9-12th grade curriculum that aligns content standards across disciplines. Finally, interdisciplinary groups design an integrated curriculum unit.

Abstract Algebra

MATH 8300 ***3 cr.***

A study of algebraic structures including groups, rings, integral domains and fields. Topics include homomorphisms, factor rings, factorization domains.

Topics in Advanced Mathematics

MATH 8900 ***3 cr.***

Courses having a more narrow focus or those taught on an irregular basis may be offered. New courses may be taught on an experimental basis under this title.

Internship

MATH 9500 ***3 cr.***

See BIOL 9500 for course description.

Nursing

Graduate nursing courses are open to matriculated nursing majors only, or by special permission of the graduate chairperson.

Nursing with Diverse Populations

NURS 7000 ***1 cr.***

This course focuses on concepts of culture, ethnocentrism, and diversity. The impact of cultural sensitivity on role enactment as an advanced practitioner is explored. Case studies are used to facilitate examination of values and beliefs.

Nursing Theory

NURS 7200 ***3 cr.***

The course examines the process of theory development in nursing as a necessary tool to provide guidelines for advanced practice, as well as to foster a deeper understanding of the discipline as a whole. The concept of diversity in relation to theories is also included. Students have the opportunity to evaluate current theories in nursing and to explore one theory in depth.

Advanced Clinical Concepts

NURS 7300 ***2 cr.***

This course provides the opportunity to validate current clinical skills and develop advanced professional decision-making abilities. Clinical issues, such as performance evaluation, collaboration, and ethical considerations are addressed. A clinical component provides the opportunity to increase skills in critical thinking, processing data, and clinical decision-making.

Prerequisite: NURS 7000.

Contexts for Advanced Practice

NURS 7400 ***3 cr.***

Students acquire a framework for understanding the political, social, and economic factors in health service delivery and their relationship to advanced practice in nursing. The focus is on understanding and facilitating change in health care and nursing systems. Topics include theories of health economics (financing and cost containment), principles of health planning and policy, diversity issues in delivery of health services (including comparative health care systems), use of health status indicators, and information management.

Role Theory: Application to Advanced Practice

NURS 7500 ***2 cr.***

This course focuses on role theory and its application to role assimilation and enactment as an advanced practice nurse. Research and support of role theory is examined. Current and potential dimensions of the advanced practice role are explored in the context of clinicians, educators, quality controllers, consultants, administrators, and researchers. Role creation and negotiation are addressed.

Qualitative Nursing Research

NURS 7800 ***2 cr.***

This course concentrates on skill development in the application of qualitative research methodologies. The relationship between basic assumptions underlying qualitative research and strategies for data collection, analysis, and interpretation of findings is explored. Qualitative research is critiqued focusing on scientific merit and ethical and legal considerations.

Epidemiological and Experimental Nursing Research

NURS 7900 ***2 cr.***

In this course students learn to apply statistical methods to the study of clinical and community health problems. Topics include sources of epidemiological data, accuracy of biostatistical measures, appraisal of cause-effect relationships, and design of case-control and retrospective studies.

Prerequisite: undergraduate statistics course.

Introduction to Forensic Nursing

NURS 8000 ***2 cr.***

This course establishes the foundation for forensic decision making in advanced nursing practice with an emphasis on a holistic approach to living victims and perpetrators. The relationship between sociocultural factors and violence is explored. This course also includes an incisive exploration of the principles and philosophies of clinical forensic nursing as well as the role of the forensic nurse in the scientific investigation of violence, trauma, medical-legal and ethical-legal issues. Topics include assaults, accidents, homicides, suicides, custody, documentation, expert witness testimony, and anatomical gifts. Students learn basic forensic health assessment.

Prerequisite: majority of core courses.

Scientific Foundations for Forensic Nursing Interventions

NURS 8100 ***3 cr.***

This course provides a comprehensive overview of specialized topics in clinical forensic practice as a foundation for the advanced practice nursing role. Areas of exploration will include physical assessments and autopsy findings in forensic pathology, clinical laboratory tests, and pharmacological usage. The complimentary roles of different professions in medical-legal investigative systems in relation to trauma and causes of death will also be identified.

Forensic Nursing: Caring for Victims and Perpetrators, I

NURS 8200 ***3 cr.***

This is a two-course sequence identifying the role of the forensic nurse in the care of victims and perpetrators. Theories are presented on numerous topics including: (1) psychiatric disorders resulting in forensic involvement, focusing on individuals diagnosed with personality disorders, psychotic thinking and drug addictions; (2) violent behavior resulting in sexual assault, domestic violence, gang violence, and deviant cults; (3) trauma and post-traumatic stress affecting the victim of violence , and (4) children in danger of becoming victims and/or perpetrators. Etiologies and interventions including judicial, psychological, cultural, genetic, and social are discussed. The legal, ethical, clinical, and advocacy responsibilities of the advanced practitioner are key concepts emphasized throughout these courses. Students will participate in a minimum of eighty-four hours of clinical practice (forty-two per semester) in selected, approved agencies related to the didactic content.

Prerequisites: NURS 7200, NURS 7300, NURS 7400, NURS 7500, and NURS 8000.

Forensic Nursing: Caring for Victims and Perpetrators, II

NURS 8300 ***3 cr.***

This is a two-course sequence identifying the role of the forensic nurse in the care of victims and perpetrators. Theories are presented on numerous topics including: (1) psychiatric disorders resulting in forensic involvement, focusing on individuals diagnosed with personality disorders, psychotic thinking and drug addictions; (2) violent behavior resulting in sexual assault, domestic violence, gang violence, and deviant cults; (3) trauma and post-traumatic stress affecting the victim of violence , and (4) children in danger of becoming victims and/or perpetrators. Etiologies and interventions including judicial, psychological, cultural, genetic, and social are discussed. The legal, ethical, clinical, and advocacy responsibilities of the advanced practitioner are key concepts emphasized throughout these courses. Students will participate in a minimum of eighty-four hours of clinical practice (forty-two per semester) in selected, approved agencies related to the didactic content.

Prerequisites: NURS 7200, NURS 7300, NURS 7400, NURS 7500, NURS 8000, and NURS 8100.

Research Application

NURS 9000 ***2 cr.***

This course focuses on the application of the research process in the clinical practice setting. Emphasis is on the completion of a thesis/research project under the guidance of faculty.

Prerequisite: is taken concurrently with the capstone practicum, NURS 9500.

Practicum in Forensic Nursing

NURS 9500 ***3 cr.***

In this capstone course students select one (or more) area(s) of nursing practice to pursue in greater depth. After prior consultation with the program faculty, students find a clinical placement that gives them the opportunity for role negotiation and role development in the forensic nursing practicum. During the practicum priority is placed on the development of leadership roles and interpersonal and psycho-motor skills needed to serve a selected client population under the preceptorship of an expert nurse. Nursing competence in primary, secondary, and tertiary prevention activities is a required outcome. A minimum of 90 hours in clinical practice and attendance at a biweekly seminar are both required.

Prerequisite: all required courses are taken concurrently with NURS 9000.

Occupational Education

Seminar and Practicum in Vocational Education/Special Education

OCED 6002 ***3 cr.***

Students complete a practicum or internship in an approved setting for individuals with special needs. Students are assisted in implementing the various facets of their role within a given setting. Visitations by student advisor are planned not only to observe the competencies being demonstrated but to meet with school administrators in defining the role and functions. Practicum seminar is designed to assist the total group in dealing with current concerns and issues and to allow students to learn from the experiences of each other.

Promoting Positive Social Behavior for Students with Special Needs in Vocational Education

OCED 6003 ***3 cr.***

The course provides familiarity with the continuum of services required for students with special needs in all school settings. The modifications of approach and teaching techniques that make vocational education accessible to all students are discussed in depth. A case study is required of each student in the course.

Students with Special Needs in Vocational Technical Education

OCED 6004 ***3 cr.***

The course traces the development of Special Needs Programs with emphasis on the identification and understanding of special needs students in vocational schools. Particular attention is given to teaching techniques and administrative organization patterns utilized in a vocational school.

Note: This is a required course for candidates seeking either Massachusetts Department of Education approval as a vocational technical instructor or Special Ed/Voc Ed Mini-approval.

Strategies and Methods for Teaching Students with Special Needs

OCED 6005 ***3 cr.***

The course uses a practical approach to planning instruction for special needs students in the regular class within a vocational school setting. Using a framework for applying theory in practice, teachers develop and/or attempt strategies that are applicable to their classrooms.

Implementation and Evaluation of Education Plans for Students with Special Needs

OCED 6006 ***3 cr.***

The course provides experience in interpreting educational prescriptions for implementation within vocational training programs. Each student designs an individualized instructional plan describing all materials, recommended methodology, and techniques of evaluation.

History and Philosophy of Occupational Education

OCED 7000 ***3 cr.***

The course studies the leaders, organizations, and movements that have contributed to the development of occupational education in the United States. Particular attention is given to the philosophies of past and present, along with the issues and problems that have affected occupational education.

Seminar in Occupational Education

OCED 7050 ***3 cr.***

The seminar is a critical study of selected current problems in occupational education. Participants apply recent readings, reports, products, and research as tools to analyze strategies for strengthening the delivery of occupational education within a variety of settings. The group may also accept appropriate field-based projects which impact or otherwise address critical occupational education concerns.

Supervision in Occupational Education

OCED 7100 ***3 cr.***

This course deals with several aspects of the role of supervisory personnel to demonstrate how educational supervision is a carefully structured leadership with responsibilities related to the improvement of instruction. In the context of a supervisory role, students examine in-service training, inspection, staff guidance, research, and evaluation of personnel and curriculum concerns. Various levels of supervision and organization patterns are analyzed.

Evaluation in Occupational Education

OCED 7150 ***3 cr.***

This course in educational evaluation is designed for graduate students who are pursuing an advanced degree in the field of industrial technology education, vocational technical education, or a related area. Students receive instruction relating to the development and evaluation of written achievement tests. Further teaching is presented relative to basic descriptive statistics and parametric techniques.

Public School Laws Relating to Occupational Education

OCED 7200 ***3 cr.***

The course is a study of federal and state laws pertaining to occupational education. Particular attention is given to the legislative process as it relates to current school law and to the judicial process in its interpretation of school law.

Research and Statistics in Occupational Education

OCED 7250 ***3 cr.***

This course is designed to enable occupational educators to plan research, write research reports, and interpret statistical occupational education data. Each student is expected to demonstrate proficiency in educational research by designing a research project pertaining to one or more components of occupational education.

Curriculum Development in Occupational Education

OCED 7300 ***3 cr.***

In this class, emphasis is placed upon the teacher as an innovative designer of strategies for planning curriculum. The process of designing and accessing model curriculum projects in occupational education is examined and explored in depth. Various curriculum development models are reviewed, evaluated, and discussed.

Public School Finance in Occupational Education

OCED 7350 ***3 cr.***

This course examines the basic accounting systems, state laws pertaining to finance, federal funding, and laws and procedures regarding funding application approval. The course also offers information on central reimbursements from federal and state levels that affect education.

Advanced Methods of Teaching in Occupational Education

OCED 7400 ***3 cr.***

The course is designed to review a detailed treatment of the nature of occupational education, the findings of modern learning theory, and the impact these considerations have upon modern occupational education teaching.

Organization and Administration of Vocational Guidance

OCED 7410 ***3 cr.***

This course provides the administrator, counselor, and teacher with a working knowledge of the various tools, techniques, and practices which comprise a unified guidance organization.

Administration of Cooperative Education Programs

OCED 7420 ***3 cr.***

This course analyzes current policies, practices, and methods of conducting cooperative occupational education programs. An examination of national, state, and local program administrative procedures is made through an analysis of literature related to cooperative occupational education.

Effective Teaching of Special Needs Students in the Vocational Environment

OCED 7430 ***3 cr.***

This course is designed to review and focus on issues in vocational education that are equated with quality education and quality teaching. Although these issues are presented individually, the topics, when combined in practice in actual classrooms and shops, give a clear understanding of teaching and learning in a vocational situation.

Professional Development Workshop

OCED 7440 ***2 cr.***

This state-of-the-art workshop is for Occupational/Vocational Educators seeking to fulfill the thirty hour Professional Development requirement of the Division of Occupational Education.

Vocational Special Needs Seminar

OCED 7450 ***3 cr.***

This course deals with current issues related to Vocational Special Needs. Class discussions are also concerned with local, state, and national special needs topics.

Computer Aided Drafting I

OCED 7600 ***3 cr.***

A basic course in automated drafting emphasizes the utilization of computer assisted drafting (CAD) to generate typical manufacturing drawings. Knowledge gained through this course allows students to apply computer-assisted drafting to a wide range of technical drawings used in other fields such as architecture and topography.

Computer Aided Drafting II

OCED 7610 ***3 cr.***

A continuation of OCED 7600.

History of Technology

OCED 7620 ***3 cr.***

The identification, definition, and understanding of technology as the subject matter of industrial arts is analyzed. Special emphasis is placed upon the implementation of a technology-based industrial arts program at the secondary level.

Principles of Automated Manufacturing I

OCED 7630 ***3 cr.***

The course studies the automation in manufacturing emphasizing computer control of production functions. Automated and manual approaches are compared and techniques for implementing automation are reviewed. Students are provided with the necessary computer background to support hands-on experience with assembly robots.

Principles of Automated Manufacturing II

OCED 7640 ***3 cr.***

This course provides further consideration of automated manufacturing including production processes. More detailed study of present generation robots and potential advances is included.

Quality Control

OCED 7650 ***3 cr.***

The principles and techniques of statistical quality control are developed and applied to typical manufacturing situations. Special consideration is given to quality control in automated manufacturing environments.

Material and Process Cost Estimating

OCED 7660 ***3 cr.***

The philosophy, principles, and practices of material and process cost estimating are studied, stressing data development and application methods for operation, product, and project analysis. Topics such as labor analysis, material analysis, operation, and product estimating are included.

Independent Study

OCED 9000 ***1-6 cr.***

Individualized study under close supervision for superior students.
Prerequisite: permission of Advisor.

Physical Education

Developing Health Education Materials in the Schools

PHED 7001 ***3 cr.***

The purpose of the workshop is to acquaint school personnel with materials and resources available for the development of health education programs. Health topics include: nutrition, personal hygiene, bicycle safety, drugs, smoking, alcohol, cancer, heart disease, physical therapy, podiatry, physical fitness, and certification in basic cardiopulmonary resuscitation. These topics are discussed by several guest speakers representing national and local health organizations.

Professional Development

Effective Instructional Processes: Theory to Practice

PDEV 9000 ***6 cr.***

Participants study current research on transdisciplinary, multi-cultural curricula that incorporate tactics for teaching critical thinking in the curricula. Practical application in the classroom is facilitated through the study and practice of cooperative learning strategies and peer coaching techniques. Through its design, implementation, and evaluation, this course models and examines effective practices for adult learners.

Staff Development Programs: Design, Management, and Evaluation

PDEV 9200 ***6 cr.***

Students study the varied purposes and potential outcomes of staff development and in-service programs offered to teachers in a public school setting. The steps involved in needs assessment, program design, adult instructional methodologies, and program monitoring and evaluation procedures are studied and practiced. Each student, functioning as a member of a team, designs a twelve week staff development course to implement in the parent school system. The staff development courses offered by the graduate students carry system assigned, in-service credits and are related to the goals and objectives of the parent school system. Participants enrolled in these staff development courses are fellow teachers in the school system.

Research Seminar in Education

PDEV 9300 ***3 cr.***

The purpose of this course is to enable students to have a working knowledge of educational research. The content areas covered include the nature of social science research, methods, procedures, related statistics, interpretation of research, and research plans. Students learn through a variety of methods, including selected readings, written homework, assignments, class lectures, presentations and discussions, and research.

Seminar and Internship in Staff Development

PDEV 9400 ***6 cr.***

During this final academic/application phase, the graduate students implement a professional development program for teachers and support staff in their school system. The intern assesses the needs of the staff, consults with peers and colleagues about the design of a professional development program, designs and implements the program, and evaluates its effectiveness. In addition to the internship, the students participate in seminars, which take place on-location throughout the semester program.

Graduate Thesis

PDEV 9500 ***3 cr.***

Students must meet the requirements of the Graduate Division's Thesis Program. In order to complete this phase of the program, a faculty committee is established by the student under the guidance and supervision of the graduate advisor.

Psychology

Applied Statistics for Counselors

PSY 5530 ***3 cr.***

A prerequisite undergraduate course for students applying to the M.S. in Counseling Program.

Students are introduced to basic concepts in statistics and probability with emphasis on the testing of statistical hypothesis using the methodology of inferential statistics.

Prerequisite: PSY 1100. Does not count for Psychology major or minor.

School and Standard Adjustment Counseling: Professional Practice, Standards and Ethics

PSY 7000 ***3 cr.***

The philosophy, structure and dynamics of schools and the school systems will be explored. The roles of various school personnel, especially School Counselors and School Adjustment Counselors, in providing and coordinating services to children will be studied. Consulting services to children will be emphasized. Legal and ethical issues involved in the practice of Counseling in schools will be examined.

Prerequisite: PSY 1100

Mental Health and Family Counseling: Professional Practice, Standards and Ethics

PSY 7005

This course addresses the professional orientation, including the history of mental health counseling and marriage and family and family counseling within the context of health and human services systems; mental health public policy and legislation; consumer needs assessment and advocacy; and the role of professional associations. Professional standards of training, practice and licensure are covered. The legal and ethical issues that affect the professional practice of counseling; such as reporting, confidentiality, duty to warn and ethical standards are explored. Professional practice issues such as malpractice, dual-relationships, client rights and professional responsibilities are examined.

Prerequisite: PSY 1100, PSY 2350, and a course in Psychology of Development.

Counseling Theories

PSY 7010 ***3 cr.***

Participants in this course examine the major paradigms and theoretical approaches to counseling, including Organic-Medical, Psychoanalytic, Person-Centered, Behavioral, Rational-Emotive/Cognitive, Systemic/Family, and Group. In addition to increasing participants' understanding of the therapeutic process, the course focuses on increasing self-awareness of personal characteristics that may influence professional effectiveness. Students submit a Personal Statement Paper and compile a Counseling Referral Directory.

Note: performance in this course is part of the pre-candidacy screening process for matriculation into the Graduate Program in Counseling.

Prerequisite: PSY 1100.

Group Dynamics

PSY 7020 ***3 cr.***

This course explores the cognitive, affective, and behavioral processes within the context of groups. Part one of the course is experientially based and requires students to participate in an actual group process. Part two provides an analysis of group dynamics including an examination of the experiential component. Course emphasis is on the experiential and theoretical bases of group dynamics with the development of participant intra- and interpersonal awareness.

Note: performance in this course is part of the pre-candidacy screening process for matriculation into the graduate program in counseling.

Prerequisite: PSY 1100.

Issues in Development: Counseling Children and Adolescents

PSY 8010 ***3 cr.***

This course equips students with a strong background in developmental events of childhood and adolescence in order to enhance their understanding of a young client's point of view. Students are asked to relate developmental issues to the kinds of problems children and adolescents present to the counselor. Theories of personality are reviewed, and students are required to apply concepts from theory to case material.

Prerequisites: PSY 1100 and a course in development.

Issues in Development: Counseling Adults

PSY 8020 ***3 cr.***

The course emphasizes adult development and counseling issues of adult life, especially as they relate to an individual's developmental progress. Students consider clients in light of their developmental history, which influences present behavior. The instruction presumes that helping clients gain greater understanding of these influences aids them in their efforts to solve problems and become more satisfied in their daily lives.

Prerequisites: PSY 1100 and a course in development.

Issues in the Psychology of Death and Dying

PSY 8040 ***3 cr.***

This course explores theories, research, and literature related to death, grief, and loss. The student is encouraged to examine personal reactions to these dynamics, to relate them to ongoing development, and to apply them to the counseling relationship.

Prerequisite: PSY 1100.

Theories of Personality: Applications to Counseling

PSY 8050 ***3 cr.***

This course surveys the major theories of personality. Emphasis is placed upon the student's ability to integrate the study of personality within the context of normal developmental issues and psychopathology.

Prerequisite: PSY 1100.

Psychology of Women: Counseling Implications

PSY 8060 ***3 cr.***

This course examines how being female impacts the behavior and perception of women. A variety of topics are covered, including development of identity, hormonal determinants of behavior, sex differences in personality, women's roles in societies, and woman as a counseling client.

Prerequisite: PSY 1100.

Divorce: Process and Issues

PSY 8090 ***3 cr.***

This course is designed for students interested in increasing their understanding of marital separation and divorce. Students review the effects of this action on children and parents as well as the changes divorce imposes on personal, interpersonal, and societal levels. The various stages each family member goes through coupled with developmental issues are discussed. Strategies for helping families "grow" through the experience are demonstrated, using individual and family therapy techniques as well as support group dynamics. Remarriage and the blended family are addressed, and current research in the area is reviewed.

Prerequisite: PSY 1100.

Child Abuse and Neglect, and other Individual/Societal Dysfunctions

PSY 8100 ***3 cr.***

This course explores child abuse and neglect in the context of other societal problems such as violence, substance abuse, and legal and ethical dilemmas faced by the educator in schools today. Discussions and lectures include such topics as family systems theory and dysfunction, community and domestic violence, substance abuse, child welfare law, and justice/court systems. Further, the course is designed to teach the educator to respond to children and families in crisis, provide referrals, work as part of an interdisciplinary team, and take a proactive stance against child abuse and related problems.

Prerequisites: PSY 1100, PSY 2350 and a course in development.

Sexual Abuse of Children and Adolescents

PSY 8120 ***3 cr.***

This course emphasizes the diagnosis and humanistic treatment of the victim and the perpetrator, as well as significant others in the sexual abuse of children and adolescents. The psychodynamics of each role are discussed with an exploration of a variety of treatment modes. Case studies and speakers are used to enhance students' learning. Affective as well as cognitive approaches are used. This course is geared toward the practitioner and potential practitioner or teacher. Prior completion of a course in child abuse and neglect, experience in protective services, or exposure to abuse/neglect situations is helpful.
Prerequisite: PSY 1100.

Psychopathology I: Diagnosis and Assessment

PSY 8130 ***3 cr.***

This course explores major categories of emotional and behavioral disturbance utilizing the DSM-IV diagnostic classification system. Case vignettes are used to provide students with practice in differential diagnosis using the DSM-IV. The course reviews the following for each category of psychopathology: essential features, associated features, diagnostic criteria, and multiaxial classification. Clinical interviewing and assessment is addressed, as well as legal and ethical issues related to assessment and diagnosis. Note: A field experience (25 hours minimum) is required for this course.
Prerequisites: PSY 1100, PSY 2350 and a course in development.

Psychopathology II: Treatment Planning and Outcome

PSY 8132 ***3 cr.***

This course is an advanced graduate counseling psychology course, which assumes familiarity with patterns of emotional and behavioral disturbances and competency in utilizing the DSM-IV to determine differential diagnosis. In addition to discussing psychopathology and diagnosis, this course focuses on differential treatment planning and outcome effectiveness. Treatment planning examines various interventions, including psychopharmacology and modalities of categories of psychopathology. Students explore the role of the multidisciplinary team and the need for consultation and/or referral. Treatment termination indication is also covered.
Prerequisite: PSY 8130.

Psychopharmacology for Counselors

PSY 8135 ***3 cr.***

This course teaches counselors, residential specialists, and teachers how to collaborate with physicians to maximize the benefits of psychiatric medications for their clients. Students review the genetic and biological factors that shape personality and psychopathology. Particular emphasis is placed upon the use of psychiatric medications in the treatment of anxiety disorders, attention deficit disorder, sexual dysfunction, substance abuse, episodic rage, sleep disturbances, Tourette's syndrome, mood disorders, and schizophrenia. Other biological therapies are discussed, including the use of artificial sunlight for winter depression.
Prerequisites: PSY 1100, PSY 2350 and a course in development or permission of Instructor.

Alcohol Abuse and Other Addictive Disorders

PSY 8140 ***3 cr.***

The course is a survey of the use and abuse of alcohol and other commonly used psychoactive drugs. An understanding of the basic principles of pharmacology is reviewed along with the psychosocial correlates of substance abuse and other addictive disorders. The course provides a functional analytic framework for assessing addictive behaviors. Participants visit various substance abuse programs such as A.A., N.A., AL Anon, and an area detoxification program.
Prerequisites: PSY 1100, PSY 2350.

Intervention and Rehabilitation Services for Substance Abusers

PSY 8142 ***3 cr.***

This course gives the participant an overview of intervention and rehabilitation issues and the various systems that provide these services to substance abusers. The course considers the methods that counselors use to determine the level of care and the appropriate facilities that are most helpful to the substance abuser. In addition, the course considers the role of the criminal justice system in the rehabilitation of the substance abuser. Participants have the opportunity to learn by completing a twenty-five hour practicum in a substance abuse program. Part of this practicum includes on-campus group process supervision.
Prerequisite: PSY 8140.

Impact of Alcohol Abuse and Other Addictive Disorders on Family Systems

PSY 8143 ***3 cr.***

This course focuses on the effects of alcohol abuse and other addictive disorders on the entire family system, including children of alcoholics. Systems theory as applied to families are reviewed. The effects of trans-generational patterns of alcohol abuse and other addictive disorders on family members (including the roles that are adopted) are examined. Self help programs, for example, A.A., Al Anon., N.A., A.C.O.A. and O.A., are explored.
Prerequisite: PSY 8140.

Case Management in Substance Abuse Services

PSY 8144 ***3 cr.***

This course prepares students for working with difficult clients including those who have a substance abuse problem and a mental illness. Specific management issues such as medication, suicide risk, resistance, and denial are explored. The importance of case management and maintaining good relationships with the referral source and other components of the service delivery system is emphasized. Participants learn by completing a twenty-five hour practicum in a substance abuse program or a mental health agency that has a program for clients with dual diagnosis.
Prerequisite: PSY 8140.

Counseling the Substance Abuser

PSY 8148 ***3 cr.***

The course offers participants an opportunity to become familiar with the techniques and strategies associated with successful treatment of the addicted individual. Participants receive instruction and supervised practice in counseling procedures and skills of working with the substance abuser in a variety of modalities (i.e. individually, groups, couples, and families). Intervention strategies, including techniques for working with difficult clients in groups, are presented.
Prerequisite: PSY 8140.

Case Management and Treatment of Victims

PSY 8150 ***6 cr.***

This course helps the student develop skills in engaging, advocating for, and treating the victim of child abuse and neglect. Both the child victim and the adult survivor are considered. Students explore work done by case managers, victim witness advocates, and therapists as they help the victim on his/her road toward healing. Practitioners who currently work with victims are invited to share their expertise. Students are also aided in examining their own counter-transference issues around victimization.
Prerequisites: PSY 8100 and permission of C.P.I.

Psychology and Treatment of Offending Behavior

PSY 8160 ***3 cr.***

In this course the perpetrator of child maltreatment is discussed with particular emphasis on the child sexual abuse perpetrator. Theories to explain offending behavior are examined. Students are asked to consider ethical dilemmas surrounding the reporting and punishment/treatment of sexual abusers. Legal statutes as they apply to offending behavior are discussed. Treatment of offenders in a variety of settings (eg. outpatient, inpatient, prison, residential treatment, etc.) are considered. Both adult and juvenile offenders are studied.
Prerequisites: PSY 8100, 8150 and permission of C.P.I.

Family Treatment With Abusive/Neglectful Families

PSY 8170 ***3 cr.***

This course helps the student recognize the necessity of treating the entire family in abuse cases and develops skills in family therapy as it applies to abusive families. It is recommended that the student have completed a basic family therapy course. Note: A field experience (25 hours minimum) is required for this course.
Prerequisites: PSY 8100, PSY 8150, PSY 8160 and permission of C.P.I.

Criminal Psychopathology

PSY 8172 ***3 cr.***

This course reviews the psychodynamics, as well as familial and ecological dynamics, of situational offenders, recidivist offenders, and sociopathic offenders. Students explore the interface between traditional notions of mental health, criminal behavior, and addiction theory. Students develop an understanding of the psychological impact of criminal behavior on the offender's family, the victim, the community, and the criminal justice system.
Prerequisites: PSY 1100, PSY 2350, SOC 1100, HMSV 1100 or permission of Instructor.

Systems, Laws, and Issues in Forensic Case Work

PSY 8174 ***3 cr.***

This course examines the philosophies and social/legal mandates governing the criminal justice, mental health, and social service systems as they affect criminal offenders. The challenges confronting the professionals in these systems are explored in relation to their legal options to service and manage behavior. Topics such as dangerousness, domestic violence, and involuntary treatment are considered. Note: a field experience (25 hr. minimum) is required for this course.
Prerequisite: PSY 8172.

Treatment Issues and Interventions in Forensic Case Work

PSY 8175 ***3 cr.***

This course reviews traditional and innovative therapeutic techniques and institutional considerations for treating offenders in outpatient, inpatient, and correctional settings. Students explore strategies for dealing with resistant clients, and they learn how to develop collaborative relationships with probation and parole officers. Discussions focus on legal, therapeutic, and systems issues in counseling victims, family members of offenders, and criminal justice professionals.
Note: a field experience (25 hr. minimum) is required for this course.
Prerequisite: PSY 8172.

Mental Status Examination

PSY 8176 ***1 cr.***

This course helps students to develop a working knowledge of the technical language and content of reports from hospitals, schools, and court records. Student learn to evaluate a patient's current mood and thought processes and to judge their tendency towards suicide and public danger. The administering of a brief screening for possible neurological and physical problems is discussed. To benefit professionals outside the field of mental health, students master the translation of psychological jargon into understandable reports.
Prerequisite: PSY 2350 or PSY 8172.

Legal and Ethical Issues in Counseling

PSY 8180 ***3 cr.***

This course is intended to provide students with a general understanding of the legal and ethical issues that most affect the practice of counseling. Ethical codes and guidelines are considered within a case context, and legal issues/mandates are examined within the context of professional responsibility and implications for counseling. Topics are developed to respond to the specific needs of students as defined by career interests, licenser codes, and professional ethics, but typically include: professional standards; potential areas of criminal implications for counselors; areas of professional/civil liability, including malpractice; reporting criminal behavior; confidentiality, privileged communication and privacy; duty to warn; dual relationships; client rights; and mandatory reporting laws.
Prerequisites: PSY 1100, PSY 7010, PSY 7020.

Social and Cultural Foundations: Issues in Counseling

PSY 8190 ***3 cr.***

This course covers the multicultural and pluralistic trends as well as the characteristics and concerns of diverse groups. The attitude and behaviors based on such factors as age, gender, race, religious belief, physical disability, sexual orientation, ethnicity, language, culture, family pattern, socio-economic status, and intellectual ability are explored in the context of client population and a student's own background. Individual family and group counseling strategies for working with these diverse populations are examined while taking into consideration ethical issues.
Prerequisite: PSY 1100.

Principles of Guidance and Counseling

PSY 8200 ***3 cr.***

This course addresses the roles, activities, and problems of school counselors. Counselor relations with parents, students, teachers, administrators, and with other professionals in the pupil services field are examined. Techniques for effectively reaching and serving target populations in a school setting are explored.
Prerequisite: PSY 1100.

Occupational Information and Career Counseling

PSY 8210 ***3 cr.***

This course presents an overview of the nature of work in the technological society. Emphasis is placed on career development theories, vocational interest and educational admissions tests, and sources of occupational and educational information. Students learn about career counseling techniques and placement services in high schools, colleges, and adult career service agencies.
Note: a fieldwork experience (25 hours minimum) is required for this course.
Prerequisite: PSY 1100.

Lifestyles and Career Development

PSY 8215 ***3 cr.***

The purpose of this course is to familiarize students with work force issues and how they impact lifestyles and career development. It includes the examination of the global economy, technological changes, demographic shifts, ethics, and changes in the labor market. The interrelationships among work, family, and other life roles as well as the effects of diverse cultures, genders, and special populations are examined for their impact on career counseling and career development. Students are exposed to career decision making models; career counseling competencies; career development theory; corresponding assessment tools; and career, vocational and educational information resources and systems. Students also learn to facilitate the career development process over the lifespan.
Prerequisite: PSY 1100.

Counseling in the Elementary School

PSY 8220 ***3 cr.***

This course provides applications of counseling strategies as they relate to the development levels exhibited by elementary school students. Emphasis is placed on counseling methods and referral skills appropriate to working in school settings, with professional colleagues and parents.
Note: a fieldwork experience (25 hours minimum) is required for this course.
Prerequisite: PSY 1100.

Working with Individuals with Special Needs

PSY 8230 ***3 cr.***

The needs, levels of functioning, and contributions of individuals with special needs are examined. Educational issues and strategies for understanding and working with individuals with learning disabilities, physical disabilities, social emotional issues, medical needs, and mental disabilities are explored.
Prerequisites: PSY 1100, PSY 2350, and a course in Psychology of Development.

Intervention Methods for School Adjustment Counselors

PSY 8240 ***3 cr.***

This course focuses on the implementation of effective strategies for working with children, families, schools, agencies, and communities. Building upon a theoretical and conceptual framework, the techniques of consultation, crisis-intervention, conflict resolution, inter-school/agency/community collaboration, and referrals are examined and applied. Didactic approaches, including case studies, role playing, and case presentations, are utilized.
Prerequisites: PSY 1100, PSY 2350 and a course in Psychology of Development.

Psychological Testing and Assessment: Theory and Practice

PSY 8300 ***3 cr.***

This course is designed to give students a broad understanding of the theory and use of psychological testing and assessment. Methods of test evaluation, analysis, and interpretation, including psychometric statistics, standardization, correlation, validity, reliability, standard errors, and types of assessment scores are presented. Students examined standardized testing instruments used to measure human cognitive and affective factors, as well as environmental, performance, behavioral, and computer-assisted assessments. Age, gender, ethnicity, language, disability, cultural factors, and ethical considerations related to assessments and evaluation are explored.
Note: a fieldwork experience (25 hours minimum) is required for this course.
Prerequisite: PSY 1100, PSY 2120 or PSY 5530.

Psychological Testing and Assessment: Individual Measurement of Intelligence

PSY 8310 ***3 cr.***

This course covers the history, development, and organization of the Wechsler and Stanford-Binet tests of intelligence. Considerable time and emphasis are placed on the administration and scoring of these tests and on the interpretation and reporting of results. A certificate is awarded upon successful completion of the course. Testing materials must be purchased during the course. Field experience required.
Prerequisites: PSY 1100, PSY 2120 or PSY 5530, PSY 8300.

Psychological Testing and Assessment: Projective Techniques

PSY 8320 ***3 cr.***

This course covers techniques of measuring human personality through human figure drawings, informal projective sentence completion tests, and apperception testing. Students develop skills in administering these techniques and integrate findings into psychological reports.

Prerequisites: PSY 1100, PSY 2120 or PSY 5530, PSY 8300.

Informal Clinical Assessment of Children and Adolescents

PSY 8330 ***3 cr.***

The emphasis of this course is on developing a conceptual framework for simultaneously observing multiple dimensions of child and adolescent functioning, then translating these observations into clinical inferences to derive clinical hypotheses and treatment recommendations from these inferences. This is an advanced course necessitating familiarity with abnormal behavior and diagnosis.

Prerequisite: PSY 1100, PSY 2350 and a course in development.

Counseling Techniques and Case Analysis: Individuals and Families

PSY 8500 ***6 cr.***

This course investigates the variety of counselor skills necessary in a helping relationship to move a client from an initial interview through the processes of information gathering, assessing, goal setting, and intervention (both individually and family system oriented) to establishing an effective termination. Students practice basic and active listening skills, such as paraphrasing, clarification, probing, and confrontation. They analyze and interpret client information and problem solve. Students also learn to develop an ecosystemic map of the client system, which includes a family or origin genogram and map of the relevant contextual levels impinging on the client system. Further, the course addresses such topics as crisis intervention, individual and group intervention strategies, couple and family assessment and interventions, and case conference techniques.

Note: a field experience (25 hour minimum) is required for this course.

Prerequisites: candidacy and twenty-seven credits of phase II course work, including PSY 8010 or PSY 8020; and PSY 8130 or PSY 8200 and PSY 8210 or PSY 8220, and PSY 8300 or permission of Instructor.

Psychotherapeutic Techniques, Treatment and Modalities

PSY 8615 ***3 cr.***

This advanced course addresses, in depth, two or more dominant approaches to counseling, which may include: Rational Emotive/Cognitive, Insight-Oriented/ Interpersonal, Behavioral/Reality.

Prerequisites: PSY 1100, PSY 2350, PSY 7010, and PSY 7020. Students should check the semester's Course Bulletin to learn which approaches are included.

Crisis Intervention for Counselors

PSY 8625 ***3 cr.***

This course examines a number of sophisticated and challenging obstacles counselors face in evaluating and working with individuals who are in crisis. Counselors are prepared to perform effective mental health assessments, develop appropriate emergency intervention treatment strategies, and develop appropriate discharge planning for crisis involved individuals. Topics covered include emergency psychiatric evaluations, mental status examinations, crisis intervention techniques, legal issues, managed care systems, discharge planning, etc. Role playing situations and written assignments are utilized.

Prerequisites: PSY 1100, PSY 2350, PSY 7010, and PSY 7020.

Group Work and Leadership

PSY 8700 ***3 cr.***

This course examines utilizing group as a modality of intervention in working with adults and children. Theories and approaches to group work including support groups, psycho-educational groups, and therapy groups are covered. The course focuses on group leadership, group process and stages of group development, and group membership issues. Practical considerations in planning a group, screening and selections of group members, leading and/or co-leading a group, dealing with problems encountered in group work, and methods of evaluation of group effectiveness are examined.

Prerequisites: PSY 1100, PSY 2350, PSY 7010, PSY 7020, or permission of Instructor.

Family and Systems, Models and Interventions

PSY 8710 ***3 cr.***

This course focuses on family dynamics, personal and systematic change in the therapeutic relationship, and treatment/ intervention for various clinical issues related to children and families. Consideration is also given to theoretical models of development and psychopathology with regard to treatment planning, referrals, and consultation. Experiences are offered to learn appropriate professional and ethical strategies of family intervention.

Prerequisites: PSY 1100, PSY 2350, PSY 7010, PSY 7020, or permission of Instructor.

Helping Parents Help Their Children

PSY 8730 ***3 cr***

This course provides strategies and skills for workers who offer guidance, counseling, and/or therapy to parents of children or adolescents. Parenting issues such as enhancing self-esteem, developing and accepting responsibility, adjusting to families in transition, dealing with issues related to divorce, blending families, disciplining, sharing quality time, and becoming meaningfully involved in a child's education are explored.

Prerequisites: PSY 1100, PSY 2350, PSY 7010, PSY 7020, or permission of Instructor.

Systems Theory

PSY 8740 ***3 cr.***

This course begins by tracing the historical roots of Family Systems Therapy from its biological, anthropological, philosophical, and semantic origins by examining the works of von Bertalanffy, Kant, Locke, Bateson, and Korzybski. Emphasis is placed on the ways in which systems generate meanings and subsequent organizational structure across the following contexts: organizations, communities, schools, ethnic groups, and families.

Prerequisites: PSY 1100 and PSY 2350.

Family Models, Organization, and Process I

PSY 8750 ***3 cr.***

Through an integration of experiential and cognitive learning approaches, this intensive process seminar builds a thorough and systematic understanding of the dynamics of family systems. The theoretical frameworks include those of Kantor-Constantine, structural, and systematic family therapy. This course emphasizes developmental processes in families, especially individuation in relation to family organization and style. It is organized as a weekly process seminar supplemented by all day workshops.

Prerequisites: PSY 1100, PSY 2350, PSY 7010, PSY 7020, PSY 8740 or permission of A&FT Faculty.

Family Models, Organization and Process II

PSY 8755 ***3 cr.***

This course continues the understanding of the dynamics of a family system through integrating the models of family learned in Family Models, Organization and Process I, with those models of Olson and Beavers. Emphasis is also given to constructivism and how this school of thought applies to family process.

Prerequisites: PSY 1100, PSY 2350, PSY 7010, PSY 7020, PSY 8740 or permission of A&FT Faculty.

Advanced Systemic Intervention I

PSY 8770 ***3 cr.***

This course focuses on the process of family systems therapy by translating various systemic schools of thought into well defined treatment approaches. Students explore the therapeutic constraints of the model, the context, the therapist, and the family through role play, video, and live supervision.

Prerequisites: PSY 1100, PSY 2350, PSY 7010, PSY 7020, PSY 8755, PSY 8760 or permission of A&FT Faculty.

Advanced Systemic Intervention II

PSY 8780 ***3 cr.***

This course follows Advanced Systemic Intervention I with an increased emphasis on the therapist's personal "model for change" and its integration with the more traditional schools of family therapy. Students' "personal boundary profile" is identified and developed as it relates to students' preferred "model for change." Role play, video, and live supervision are used extensively.

Prerequisites: PSY 1100, PSY 2350, PSY 7010, PSY 7020, PSY 8770 or permission of A&FT Faculty.

Independent Study

PSY 8910 ***1 cr.***
PSY 8920 ***3 cr.***
PSY 8930 ***6 cr.***

The content of these courses is designed by a student with the guidance of a faculty member to provide in-depth exposure to a topic for which no regular course is available. A plan of study must be submitted to the Behavioral Sciences Committee on Graduate Programs and the Dean of Graduate and Continuing Education during the semester preceding the term of the proposed course. Independent Study is available by permission of the Instructor only.

Prerequisites: PSY 1100 and as determined by Instructor.

Research and Program Evaluation

PSY 8950 ***3 cr.***

This course provides students with an overview of the design and methodology of social research and program evaluation as applied to mental health counseling and education. Topics of study include: critical analyzing and evaluating of research literature, experimental research design, survey research, program evaluation, treatment strategies evaluation, needs assessments, participant observational research, and ethics in research evaluation. Student learn how to plan, conduct, and document a research and/or evaluation study in a field setting.

Note: a field work experience (25 hours minimum) is required for this course.

Prerequisites: PSY 1100, PSY 2120 or PSY 5530.

Topics in Counseling

PSY 8971 ***1 cr.***
PSY 8972 ***3 cr.***
PSY 8973 ***6 cr.***

Course content varies from semester to semester, reflecting contemporary issues in the discipline and depending upon student and faculty interest.

Prerequisite: PSY 1100 and as determined by Instructor.

Internship in Counseling

PSY 9062 ***3 cr.***

Students are placed in agencies for supervised contact with clients. Each student maintains a case load, participates in the operation of his/her agency, and meets regularly with his/her on-site supervisor to discuss case planning and counseling techniques. Students meet at the college for group supervision and conferences, and to present one of his/her client cases in detail. The faculty supervisor visits each internship site during the semester to confer with students and their on-site supervisors. The Internship requires a minimum of 150 hours of on-site experience.

Note: students must consult with the Field Placement Coordinator one semester in advance of their expected placements to begin arrangements.

Prerequisites: candidacy and PSY 8500.

Internship in Forensic Case Work

PSY 9065 ***3 cr.***

This capstone experience allows the student to develop her/his skills in a forensic setting under the supervision of a forensic worker who has worked in the field of Forensic Case Work for a minimum of two years and has earned at least a Master's degree. Seminar classes meet on campus bi-weekly. The Internship requires a minimum of 150 hours of on-site experience.

Note: students must consult with the Field Placement Coordinator one semester in advance of their expected placements to begin arrangements.

Prerequisites: PSY 8100 or PSY 8120, PSY 8140, PSY 8172, PSY 8174, PSY 8175, and PSY 8176.

Internship in Child Protection

PSY 9070 ***6 cr.***

The Internship is the culminating experience in the student's acquisition of skills for working with victims, offenders, and families who abuse/neglect. The student is placed in an agency which treats one or more of the above. The student is supervised by an agency supervisor knowledgeable in child protection. In addition the student is expected to attend a bi-weekly seminar with the college field instructor. The Internship requires a minimum of 300 hours in the field.

Note: students must consult with the Field Placement Coordinator one semester in advance of their expected placements to begin arrangements.

Prerequisites: PSY 8100 or PSY 8120, PSY 8150, PSY 8160, PSY 8170 and permission of C.P.I.

Internship in Substance Abuse Services

PSY 9072 ***6 cr.***

This capstone experience allows the student to develop her/his skills in a licensed substance abuse services facility under on-site supervision. In addition, the student is expected to attend a bi-weekly seminar with the faculty seminar instructor. The Internship requires a minimum of 150 hours of on-site field experience.

Note: students must consult with the Field Placement Coordinator one semester in advance of their expected placements to begin arrangements.

Prerequisites: PSY 8140, PSY 8142, PSY 8143, PSY 8144, and PSY 8148.

Internship in Counseling

PSY 9075 ***6 cr.***

Students are placed in agencies for supervised contact with clients. Each student maintains a case load, participates in the operation of his/her agency, and meets regularly with his/her on-site supervisor to discuss case planning and counseling techniques. Students meet at the college for group supervision and conferences, and to present one of his/her client cases in detail. The faculty supervisor visits each Internship site during the semester to confer with students and their on-site supervisors. The Internship requires a minimum of 300 hours of on-site field experience.

Note: students must consult with the Field Placement Coordinator one semester in advance of their expected placements to begin arrangements.

Prerequisites: candidacy and PSY 8500, or PSY 8755 (for the Adolescent and Family Therapy Certificate).

Internship in School Counseling

PSY 9085 ***9 cr.***

The Internship is an intensive experience in an actual counseling setting. Students are placed in elementary or secondary school guidance offices, depending on the student's desired certification level (N-9 or 5-12). Each student maintains a regular case load (some short term, some long term), participates in regular guidance activities (e.g. core evaluations, articulation with other schools, scheduling), and meets weekly with his/her on-site supervisor. Students meet at the college with their college supervisor in a seminar setting (seven meetings in the fall, three or four in the spring). During these meetings students present cases and discuss issues as they arise in the Internship. The faculty supervisor visits each internship site during the semester to confer with students and their on-site supervisors. The Internship requires a minimum of 450 hours of on-site field experience.

Note: students must consult with the Field Placement Coordinator one semester in advance of their expected placements to begin arrangements.

Prerequisites: candidacy and all required courses in Phase II of the Social Guidance Counseling course of study.

Internship in Marriage and Family Therapy

PSY 9087 ***12 cr.***

The Internship is an intensive experience in an actual counseling setting. Students are placed in agencies where they maintains a regular case load (some short term, some long term) and participate in regular Marriage and Family therapist activities. Students meet at the College with their college supervisor in a seminar setting (seven meetings in the fall, three or four in the spring). During these meetings students present cases and discuss issues as they arise in the Internship. The faculty supervisor visits each Internship site during the semester to confer with students and their on-site supervisors. The Internship requires a minimum of 600 hours of on-site field experience.

Note: students must consult with the Field Placement Coordinator one semester in advance of their expected placements to begin arrangements.

Prerequisites: candidacy, PSY 8500 and PSY 8755.

Internship in Mental Health Counseling

PSY 9090 ***12 cr.***

The Internship is an intensive experience in an actual counseling setting. Students are placed in agencies for supervised contact with clients. Each student maintains a case load, participates in the operation of the agency, and meets regularly with his/her on-site supervisor to discuss case planning and counseling techniques. Students meet at the college for group supervision and conferences, and to present one of his/her client cases in detail. The faculty supervisor visits each Internship site during the semester to confer with students and their on-site supervisors. The Internship requires a minimum of 600 hours of on-site field experience.

Note: students must consult with the Field Placement Coordinator one semester in advance of their expected placements to begin arrangements.

Prerequisites: candidacy and PSY 8500.

Internship in School Adjustment Counseling

PSY 9092 ***12 cr.***

The Internship is an intensive experience in an actual counseling setting. Students are placed in schools where they maintain a regular case load (some short term, some long term), participate in regular school adjustment counseling activities, and meet weekly with their on-site supervisor. Students meet at the College with their college supervisor in a seminar setting (seven meetings in the fall, three or four in the spring). During these meetings students present cases and discuss issues as they arise in the Internship. The faculty supervisor visits each Internship site during the semester to confer with students and their on-site supervisors. The Internship requires a minimum of 900 hours of on-site field experience.
Note: students must consult with the Field Placement Coordinator one semester in advance of their expected placements to begin arrangements.
Prerequisites: candidacy, and all required courses in Phase II of the Social Adjustment Counseling course of study.

Advanced Internship in School Counseling

PSY 9095 ***6 cr.***

This Internship is available only to those who possess a School Guidance Counselor Provisional Certificate with Advanced Standing. Students will be placed in an elementary or secondary School Guidance Office, forty hours per week in one semester (600 total hours) depending on the desired level of certification (N-9 or 5-12). Each student will maintain a regular case load and participate in other guidance and counseling related activities. In order to demonstrate clinical expertise, students will present a case to a joint meeting of student, cooperating practitioner and college supervisor. In order to demonstrate advanced understanding of professional expertise in School Guidance and counseling competencies, students will plan and carry out a project acceptable to both the cooperating practitioner and the college supervisor. The project must demonstrate an understanding of current trends in School Guidance and Counseling. Attendance at six seminars during the Internship is mandatory. College supervisors will visit students at their respective sites. Students already working in a guidance and counseling capacity may petition to use that site for Internship. Permission to do so will depend upon whether or not the counselor can meet the requirements of the Internship.
Note: Students must consult with the Field Placement Coordinator one semester in advance of their expected placements to begin arrangements for Internship
Prerequisite: Student must have Provisional Certificate in School Guidance Counseling with Advanced Standing.

Science Education

Independent Study

SCED 8001 ***1-6 cr.***

The Independent Study gives the student an opportunity for independent development of teaching techniques, laboratory procedures, written work, science curriculum, job-related document or of some other activity agreed upon by the student and the graduate faculty advisor. The final product of this study is a written or otherwise permanent documentation of the work accomplished.

Internship

SCED 8002 ***1-6 cr.***

The Internship provides laboratory or field experience in conjunction with established research programs at cooperating off-campus governmental, industrial, or private institutions. Supervision is shared by the institutional program directors and faculty from Fitchburg State College. A comprehensive paper describing the Internship activities is required upon completion of the experience.

Practicum in Science

SCED 8003 ***1-6 cr.***

The practicum provides student teaching experience in area schools and in the college campus school, designed to meet the state requirements for teacher certification.

Methods in Biology and Earth Science Teaching

SCED 9000 ***3 cr.***

The emphasis of the course is upon developing a working philosophy of science teaching for the master teacher. Students examine of the nature of science teaching in the context of modern learning theory and the impact these considerations have upon modern science teaching. The dynamics of classroom interaction in relation to the role "inquiry" has in that process is considered. In addition, teacher/student verbal and non-verbal behavior, attitudes, and evaluation techniques are explored.

The Modern Science Curriculum

SCED 9001 ***3 cr.***

The course provides an up-to-date survey of the science teaching curriculum materials available for use in schools, K-12. Each student develops a model science curriculum based on psychological and pedagogical principles.

Research in Science Education

SCED 9002 ***3 cr.***

Students undertake research designed to explore some phase of science teaching in detail. This study may include teaching methodology, curriculum development, and/or other activities agreed upon by the student and supervising research advisor. An element of experimentation must be included in the project. The final product is a written documentation of the research and results.

Science, Ethics, and Technology

SCED 9003 ***3 cr.***

The purpose of this course is to communicate the process of ethical reasoning. Students gain a better understanding of how cooperation between people concerned with the human application of science and the makers of public policy must become a working hypothesis. By examining current literature students uncover some of the facts and general principles of ethical reasoning and relate the short- and long-term consequences to moral positions.

Research in Science

SCED 9004 ***3 cr.***

Students undertake research in a specific field of science that involves an in-depth exploration of a well defined problem. The student must develop a hypothesis for the possible solution of the problem, then devise the experimental technique to test the hypothesis, and, ultimately conceive a logical conclusion based upon the data collected. The final product is a written documentation of the research and results. The study is completed under the supervision of graduate faculty.

Thesis

SCED 9010 ***6 cr.***

Students conduct a research project resulting in a thesis. Thesis develops under the guidance of a thesis advisor and committee.

Special Topics

SCED 9100 ***3 cr.***

Course content varies from semester to semester, reflecting contemporary issues in the discipline and depending upon student and faculty interest.

Note: many other science courses are offered from time to time. Some are cross-listed under Biology, Earth Science, and Chemistry. See specific course-listings for each semester for details. Other courses from Biology, Earth Science, or Chemistry may be used as electives or requirements.

Special Education

Early Intervention

SPED 6600 ***3 cr.***

This course focuses on assessing and working with children at risk for special needs or identified as having special needs. Current issues and concerns about infant stimulation and the role of parents and agencies in providing services are addressed.

Sign Language and Deafness

SPED 6700 ***3 cr.***

In this class students acquire a basic sign language vocabulary (SL) as used by the majority of deaf adults, including structure, grammatical principles, and vocabulary development. Issues in deaf education as well as deaf cultures and the needs of deaf individuals in the school and community are studied.

Survey of Special Education

SPED 7000 ***3 cr.***

Course content covers the characteristics and needs of children and adults with special needs. The total special education service delivery system; problems, issues, and controversies in the field; and relevant legislation are examined. Although the course is intended for regular education teachers and administrators, it provides an update for special educators and administrators.

Topics in Special Education

SPED 7001 ***1 cr.***
SPED 7002 ***2 cr.***
SPED 7003 ***3 cr.***

Course content varies from semester to semester, reflecting contemporary issues in Special Education and depending upon student and faculty interest.

Modifying and Adapting Curriculum

SPED 7020 ***3 cr.***

In this course students develop skills in observation techniques, learning style assessment, classroom organization, and lesson planning. This course is a prerequisite course for the Clinical Master's Degree and is required for students who wish to enter the clinical program but do not have teacher certification. Students complete a 25 hour Prepracticum (field-based) experience as part of the course.

Pedagogy in Reading, Language Arts, Math, Science, and Social Studies

SPED 7025 ***3 cr.***

In this course students demonstrate an understanding of the curriculum areas of reading, language arts, mathematics, science, and social studies. They develop lesson plans which are implemented during a 25 hour Prepracticum (field-based) experience. This course is a prerequisite for the Clinical Master's Degree. It is required for students who wish to enter the clinical program but do not have teacher certification or students with secondary certification only.

Students with Special Needs: Issues in Assessment and Education of Bilingual and Non English Speaking Students

SPED 7110 ***3 cr.***

The purpose of this course is to provide both regular and special education teachers with the background information necessary to skillfully handle the referral and assessment process and work collaboratively with others in providing optimal service for the target population. Participants will explore their own experiences and belief systems to see how these impact their professional behavior.

Perspectives in Special Education

SPED 7230 ***1 cr.***

The philosophical and legal foundations of special education are reviewed in this course. Issues related to categorical and noncategorical approaches, mainstreaming, and inclusion are analyzed. This course addresses the preliminary requirements for the Clinical Master's Degree program. Students work with the instructor to acquire competencies and complete a comprehensive examination.

Technology in Special Education

SPED 7250 ***3 cr.***

This course provides an overview of the application of computers to special education. The role of computers for diagnostic, instructional, and administrative purposes in special education settings is examined. Students evaluate existing hardware, software, and peripherals in terms of their applicability for individuals with special needs. Students utilize tool software (word processing, data base) and commercial software to develop and increase their computer skills.

Working with Families with Special Needs Children

SPED 7300 ***3 cr.***

This course defines and discusses issues of families with one or more children with special needs. The focus is on the effects a child with disabilities has on the family system and on the roles of individuals in the family. Strategies for working effectively with families are emphasized.

Emotional Disturbances: Theory and Practice

SPED 7400 ***3 cr.***

This course is designed to examine the major theoretical frameworks that conceptualize and explain emotional disturbance. Students utilize these conceptual frameworks to focus on identification, assessment, and the development of effective treatment approaches for children.

Advanced Strategies for Teaching School-Age Children with Emotional and Behavioral Problems

SPED 7410 ***3 cr.***

This course builds upon theoretical perspectives of SPED 7400. Students explore their own responses to conflict and stress and identify and practice strategies suited for teaching troubled children and youth. In addition, students examine issues pertinent to the education of this population.

Prerequisite: SPED 7400.

Inclusion of Students with Special Needs in Regular Education

SPED 7650 ***3 cr.***

Students will analyze barriers to inclusion and develop effective strategies for integration of individuals with special needs into all aspects of the community including home, school, and work setting. Students will define and redefine their role as professionals as it relates to their philosophy of integration.

Note: Not for students in the Clinical Master's Program.

The High School Environment– Challenges In Educating Students with Special Needs

SPED 7709 ***3 cr.***

The high school environment is undergoing dramatic change shaped by social, political, technological, methodological, and philosophical issues and controversies. Students will analyze the external forces pressing for redesign of administrative structure, delivery of education, the learning environment and how those changes impact students with special needs. Research-based methods for teaching to a wider range of abilities, and models for curriculum modification and staffing reallocations will be discussed.

Physical and Medical Aspects of Working with Children with Disabilities

SPED 7950 ***3 cr.***

The course provides an overview of the basic neurological and physiological systems of the body while exploring typical and atypical development. Disabilities common in infants, children and adolescents (e.g., seizures, cerebral palsy) are examined with a focus on educational adaptations and accommodations. Various models of service provision are contrasted. Collaborative strategies for working with students with physical disabilities and health impairments are developed.

Assessment and Educational Planning for Student with Brain Injuries

SPED 8120 ***3 cr.***

This course is an in-depth study of the developmental assessment of an instructional programming for students with brain injuries. Students learn general interpretation of educational, psychological, neurological and neuropsychological assessment information to develop educational programs for students. Additional time is spent studying and developing functional educational curricula, compensatory strategies, and transitional programs.

Screening and Assessment of At-Risk Infants and Toddlers

SPED 8140 ***3 cr.***

The course describes the purpose, importance and limitations of early identification, screening, and evaluation of infants and toddlers at risk for development delays and disorders. Valid and reliable Department of Public Health (DPH), approved screening and evaluation tools will be reviewed and administered.

Understanding the Brain and Brain Injury

SPED 8170 ***3 cr.***

The course is a comprehensive overview of the brain and brain injury from an educational perspective. Students learn basic neuroanatomy, brain behavior relationships, and the impact of injury on neurodevelopment in children and adolescents.

Behavioral Issues In Inclusive Classrooms

SPED 8180 ***3 cr.***

A framework is provided for thinking about and resolving behavioral issues teachers encounter in today's classrooms. Various theoretical approaches are presented. Teachers are required to implement strategies in their classrooms and report and discuss results.
Note: Not for students in the Clinical Master's Program.

Seminar in Brain Injury Education and Neurorehabilitation

SPED 8210 ***3 cr.***

This course is an interactive study of the cognitive, psychosocial, and behavioral, and neuromotor needs of students with brain injuries. Students develop and report on model systems, innovative educational and rehabilitative programs, and community reintegration services for students and their families.

Clinical Internship in Brain Injury Education and Neurorehabilitation

SPED 8220 ***6 cr.***

A directed six-week Internship at the May Center for Education and Neuro-rehabilitation and Boston Area Hospitals that incorporates teaching students with brain injuries, integrating them into the community and providing transition services for students as well as experiencing family services with daily mentoring and weekly clinical forums.

Language Development, Differences and Disorders (formerly Language Acquisition)

SPED 8300 ***3 cr.***

This courses addresses normal development of receptive and expressive language in terms of phonology, morphology, syntax, semantics and pragmatics. It focuses on the language performance exhibited by different populations of children/adults with special needs. The language of bilingual-bicultural children and language disordered adolescents are addressed. Students develop an understanding of the principles and practices related to assessment and intervention for children with language disorders. Students assess language needs and plan appropriate strategies. Field experience required for testing and program planning.

Secondary Programs in Special Education

SPED 8700 ***3 cr.***

The course is designed to enable students to acquire the knowledge needed to implement effective practices and to assess materials for use with adolescents and young adults with special needs. Students learn to plan, organize, and implement special education programs, including IEP development, mainstreaming, and transition to the adult world.

Fieldwork (Intensive Special Educator)

SPED 8801 ***1 cr.***

This course provides students enrolled in the Clinical Master's Program who already hold Standard Certification in any area, or Provisional with Advanced Standing in Special Education with the opportunity to work with students who have special needs in connection with Clinical Coursework I & II. Students are involved in schools 3-5 hours a week (minimum) as they implement assignments related to Clinical Coursework and they begin to develop skills in working with diverse learners.

Teacher of Students with Intensive Special Needs

Clinical Course Work I Intensive: Foundations in Assessment, Curriculum, and Program Development; Collaboration to Support Change

SPED 8814 ***6 cr.***

The philosophical underpinnings of the Clinical Master's Program: Intensive are identified in this course. The need for educational programs to be provided in inclusive settings is explored and emphasized. Students examine curriculum development processes and models. Various theoretical approaches to assessment are addressed. The theoretical framework for analyzing behavior is examined. Various strategies for increasing appropriate behavior, decreasing inappropriate behavior, and teaching new behaviors are introduced. Students identify specific behaviors, analyze the context of those behaviors, design interventions, and monitor behavioral changes. Students learn supportive models of consultation for working with peers and parents and the associated skills of active livening, joint problem solving, giving and receiving feedback, and self evaluation. Semester-long collaboration projects offer students the opportunity to practice skills and receive feedback.

Clinical Course Work II Intensive: Assessment, Curriculum, Strategies and Program Development in Functional Domains; Collaboration for Families and Advocacy

SPED 8824 ***6 cr.***

The course focuses on student application of program development and implementation strategies established in SPED 8814. Assessment strategies that relate specifically to the areas of community, domestic, vocational, and recreational skills are addressed. Students assess an individual with intensive special needs and develop an IEP. Students develop and implement additional behavioral change and instructional projects as well as practical quantitative and qualitative data collection strategies. The analysis of data is used to guide program modification. Students work collaboratively with a family that includes a child with intensive special needs to develop a family service plan. A study of area social service agencies is conducted and a resource directory is developed. Communication and collaboration skills learned in the previous semester continue to be developed and refined.

Clinical Course Work III Intensive: Assessment, Curriculum, and Strategies Re: Language, Physical and Medical Issues and Collaboration for the Educational Team

SPED 8834 ***6 cr.***

Students build on their knowledge of normal language development and language disabilities to assess and plan for students with severe language and communication limitations. They evaluate assessment tools and procedures for determining a student's language abilities and functional needs. Strategies for promoting language development are identified along with an examination of augmentative communication methods. Classroom implications of various physical and medical conditions are addressed. Appropriate feeding, positioning, and handling strategies are presented. Concerns regarding seizure disorders, cardiovascular problems, neuromuscular problems, etc., are addressed. Particular attention is given to using appropriate assessment techniques, and developing strategies to modify curriculum for the education of students with intensive communication, physical and/or medical needs in inclusive settings. Collaboration and communication skills learned in the previous semesters are applied to the roles of members of educational teams. Students learn how to work cooperatively and collaboratively as they function as a member of a team to resolve conflicts and to develop a transdisciplinary IEP.

Clinical Course Work IV Intensive: Assessment, Curriculum Strategies for the Academic Areas; Transition from School to Work; Collaboration for Inclusion and Ethical Issues

SPED 8844 ***6 cr.***

In this course students address assessment and strategies that relate specifically to the areas of functional academics. Curriculum modification approaches relevant to inclusive settings are highlighted. Students assess an individual with intensive special needs and develop an IEP within the academic areas. A review is conducted of human services agency policies, individual transition planning strategies, and secondary work program designs for enhancing the opportunities of students with intensive special needs graduating from special education to adult life. Communication and collaboration skills learned in the first three semesters of the clinical program are applied to specific team projects. Students learn to motivate individuals for inclusion, to move them past resistance, and to help them resolve issues.

Practicum (Intensive Special Educator)

SPED 8861 ***6 cr.***

This course is the "student teaching" experience for students in the first year of the clinical program who do not have a prior certificate. Through a 150 hour field based experience students are provided an opportunity to develop skills and demonstrate competency in the area of certification they are seeking. This course is one of the requirements for Provisional with Advanced Standing certification status.

Clinical Experience (Intensive Special Educator)

SPED 8862 ***6 cr.***

This course provides students in the second your of the clinical program with an opportunity to demonstrate skills they are learning in the clinical coursework as well as demonstrating competencies required for Standard Certification. The experience is designed to be a supportive one, with clinical supervisors providing students with guidance and support needed to enhance their development as teachers.

Fieldwork Credit (Special Educator)

SPED 8901 ***1 cr.***

This course provides students enrolled in the Clinical Master's Program who already hold Standard Certification in any area, or Provisional with Advanced Standing in Special Education with the opportunity to work with students who have special needs in connection with Clinical Coursework I and II. Students are involved in schools 3-5 hours a week (minimum) as they implement assignments related to Clinical Coursework and they begin to develop skills in working with diverse learners.

Teacher of Students with Special Needs

Clinical Course Work I: Teacher of Students with Special Needs: Assessment, Curriculum, Strategies in Language Arts

SPED 8914 ***6 cr.***

Students develop an understanding of the processes for developing reading and language arts skills with students who have special needs. Alternative and traditional assessment strategies are addressed and applied to students with special needs in the clinical experience. Adaptation strategies, including the use of educational technology for teaching language arts and social studies is addressed. Concepts of measurement are studied to enable students to establish criteria for selecting appropriate assessment tools. Students evaluate assessment devices for technical quality.

Clinical Course Work II: Assessment, Curriculum and Strategies for Math/Science

SPED 8924 ***6 cr.***

Students learn current approaches for teaching math and science as well as appropriate strategies for modifying instruction when necessary. The standards of the National Council for the Teaching of Mathematics (NCTM) are presented. Specific computer programs are studied to demonstrate the integration of computers into units of study. Students with special needs are evaluated using formal and informal assessment tools, background information, and observation. Alternative assessment techniques are emphasized and applied in the clinical experience.

Clinical Course Work III: Assessment in Cognition/Achievement/ Transition: Curriculum for Social Skills and Affective Development: Strategies for Behavior Management and Transition; Collaboration Skills for Inclusion/Transition

SPED 8934 ***6 cr.***

Graduate students evaluate students with special needs to determine cognitive skills, achievement in all areas, transition needs, career education, and affective assessment. Graduate students determine curriculum and instructional strategy modifications for students to develop social skills and enhance their affective development. Behavior management strategies for the classroom and for transition to the world of work are addressed. Special attention is given to the diverse population of today's schools, especially to students at risk. Students learn collaborative models of consultation for working with peers and parents. Active listening, joint problem-solving, giving and receiving feedback, and self-evaluation are among the topics addressed. Semester long collaboration projects offer students opportunities to practice skills and receive feedback from a number of sources.

Clinical Course Work IV: Legal and Ethical Issues in Assessment: Curriculum Theory and Development; Transitions Collaboration with Families, the Educational Team

SPED 8944 ***6 cr.***

This course focuses on the legal and ethical considerations in assessment. The philosophical underpinnings of effective curriculum development are addressed. The need for educational programs to be provided in inclusive settings is explored and emphasized. Students examine and then develop a curriculum development process and write a reflective paper that examines "What is a good school?". The strategies strand focuses on reflective teaching and the strategies used to implement changes in schools relative to providing services to students with special needs. Students work collaboratively with a family that includes a child with special needs and other members of the professional team. Communication and collaboration skills learned in the previous semester continue to be developed and refined.

Assessment Practices for Children with Special Needs

SPED 8950 ***3 cr.***

This course examines the use of formal and informal assessment devices as well as criterion referenced and non-referenced techniques. Students use various assessment strategies as they observe, analyze and interpret children's learning needs. Varied test instruments are reviewed and current issues in assessment are researched and discussed.

Practicum (Special Educator)

SPED 8961 ***6 cr.***

This course is the "student teaching" experience for students who do not have a prior certificate. Through a 150 hour field based experience students are provided an opportunity to develop skills and demonstrate competency in the area of certification they are seeking. This course is one of the requirements for Provisional with Advanced Standing certification status.

Clinical Experience (Special Educator)

SPED 8962 ***6 cr.***

This course provides student with an opportunity to demonstrate skills they are learning in the clinical coursework as well as demonstrating competencies required for Standard Certification. The experience is designed to be a supportive one, with clinical supervisors providing students with guidance and support needed to enhance their development as teachers.

Research in Special Education

SPED 9000 ***3 cr.***

In this course students learn specific skills necessary to read and interpret relevant research. Students write critiques of current articles and discuss alternative interpretations in class. Students also design and implement a research prospectus.

The Adult Learner

SPED 9010 ***3 cr.***

The course focuses on the nature of the developing adult as a learner. An understanding of how the adult learner processes experience, how learning is best structured, and how to provide feedback is emphasized. An extension of this focus includes an investigation of human relations, gender uniqueness, as well as relations within diverse populations as they impact the personal competence of the adult learner. Journals and readings are the basis for guided reflection and introspection.

Special Education and Law

SPED 9120 ***3 cr***

Students will review policy and program regulations associated with Massachusetts Chapter 766, IDEA, Section 504 of the Rehabilitation Act, and Americans with Disabilities Act, as they apply to implementation of services in school-based settings. Precedent setting court decisions associated with those laws will also be examined. New legislation affecting educational practices in general, and therefore, affecting special education practices, will be explored. Students will have the opportunity to explore case studies and challenge their own ability to think critically about various situations.

Reading/Language Problems: Advanced

SPED 9130 ***3 cr.***

The focus of the course is on severe reading and written language problems. Dyslexia and related problems are analyzed in terms of theory and practice. Orton-Gillingham (phonology) and Project Read (comprehension) techniques are addressed. Field experience required. *Prerequisites: a reading and a language course or permission by the Instructor.*

Woodcock/Johnson—Revised

SPED 9150 ***3 cr.***

This course focuses on the WJ-R. Students will demonstrate knowledge of theories of intellectual processing and skill in administering, scoring and interpreting the Cognitive and Achievement batteries of the WJ-R. An understanding of the early childhood, elementary or secondary school curriculum is necessary. Previous preparation in educational assessment and basic knowledge of statistical terminology related to norm-referenced testing are prerequisites. Student Profiles will be analyzed. A field-based component is required. Kits need to be obtained from the students' school systems.

Consultation Collaboration Strategies

SPED 9200 ***3 cr.***

Students study theory and practice skills related to communication skills and processes as well as effective consultation strategies for working with school personnel. The process of collaborative consultation is practiced in class in addition to peer coaching and mentoring. Students learn how to evaluate their consultation skills and maintain themselves as a consultant.

Educational Strategies

SPED 9250 ***6 cr.***

Given the context of the adult learner and the process of implementing educational change studied in the previous courses in the CAGS sequence, the focus of this course is on effective and promising strategies which improve teaching and, thereby, learning for all children. Students become proficient at critiquing the design, analysis, and results of research to determine which strategies hold promise for improving teaching. Students also study current effective strategies in the field, such as cooperative learning, social interaction, peer mediation, teaching/learning styles, cross cultural competency, apprenticeship models, reciprocal teaching, and project approach. Lastly, students learn how to implement these strategies in their schools.

Internship and Reflective Analysis Seminar

SPED 9350 ***6 cr.***

This internship is designed to advance the development of self-directing educators who initiate, facilitate, participate in, and evaluate all aspects of educational practice. The Internship is a year-long experience which offers interns an opportunity to practice communication skills and apply collaborative skills with one or more colleagues in the field. The experience includes opportunities to plan, organize, and evaluate ways of improving instruction through the cooperative participation of school personnel and to implement educational change through such peer leadership structures and practices as mentoring, collaborative supervision, peer coaching, and team teaching. All work is carried out under the supervision of faculty. Ongoing internship projects are analyzed during biweekly seminars.

The Reflective Analysis Seminar serves as the capstone course for the CAGS program in Consultation and Peer Leadership: A Program for Teachers. Opportunities are provided which allow students to analyze their course work and their internship through an integrated and reflective process. Each session is accompanied by discussion formats with other students, by reading, and research. Students are encouraged to present "ideas" on the role of instructional leadership and its purpose in improving instruction. The instructor's role in the course is that of a facilitator.

Current Issues in Special Education

SPED 9400 ***3 cr.***

Students consider the context for special education and examine current and controversial issues such as inclusion, cost-effectiveness, educational reform, and grading. The course format gives students the opportunity to examine and debate these issues from multiple perspectives. Particular attention is given to the ways in which current issues and controversies affect classroom teachers and their students.

Independent Study

SPED 9500 ***3 cr.***

Students who wish to pursue an area of interest in Special Education that is not offered through course work may develop a program of study with a member of the graduate faculty. Faculty use a conference approach with the individual students, which places emphasis on critical thinking and sensitivity to the process of resolving issues.

Prerequisite: with permission of Advisor only.

Administration of Special Education Programs

SPED 9800 ***3 cr.***

In this course emphasis is given to services, organization programs, personnel, and facilities as they relate to the needs of the child and adult with special needs. Students are expected to be well-versed in the effects of Federal and State mandates for special education services as a result of this course.

Technology Education

Computers in Industrial Technology

ITEC 7010 ***3 cr.***

This course familiarizes students with computers through presentation of selected hardware and software concepts. Opportunities for extensive hands-on practice with application programs are provided. CAD topics are also included.

Implementing Technology Education in Public Schools

ITEC 7020 ***3 cr.***

The course provides guidelines and experience in developing and implementing Technology Education course units in the area of communication, construction, manufacturing, power/energy, and transportation. Students experiment with and develop new units for classroom implementation.

Automated Drafting Systems

ITEC 7030 ***3 cr.***

This course is designed to teach the general concepts related to automated drafting with a special emphasis on technical drawing. Specialized applications of industrial practices for drafting are emphasized in this course. One semester of technical or mechanical drafting is a prerequisite.

Advanced Methods of Teaching at the Secondary Level I

ITEC 7500 ***3 cr.***

See BIOL 7500 for course description.

Advanced Methods of Teaching at the Secondary Level II

ITEC 7550 ***3 cr.***

This course is a continuation of the ITEC 7500.

Communication in Technology Education

ITEC 8400 ***3 cr.***

The course provides exposure to the State framework area of communications using an integrated systems approach. The process of communication, approaches to technology in the laboratory, historical perspective, and social issues are addressed. Materials and programs for the Middle and High school level are integrated throughout the course and application of concepts found in the public school technology lab is stressed. The course includes lab work.

Power/Energy in Technology Education

ITEC 8500 ***3 cr.***

The course is organized around an energy system point of view. Various sources are covered, and for each source the technologies involved in the production, transmission, utilization, and related environmental/social impacts are addressed. An effort to relate material for the public school lab/classroom according to the State organizational framework is integrated throughout the course. This course includes lab work.

Manufacturing in Technology Education

ITEC 8600 ***3 cr.***

The course addresses the State framework area of manufacturing. The various systems of manufacturing used, the process involved in the production of goods and services, and the support areas for the manufacturing enterprise are covered. The integration of manufacturing principles in the Middle and High school lab environment is developed throughout the course. The course includes lab work.

Construction in Technology Education

ITEC 8700 ***3 cr.***

The course develops outcomes related to the scientific principles, engineering concepts, and technical approaches to the areas of residential, commercial, and industrial construction as identified in the State organizational framework for Technology Education. The area of construction, the processes and materials used, the techniques performed, and the planning and development of structures are studied and adapted for lab and classroom use in the public schools. The course includes lab work.

Transportation in Technology Education

ITEC 8800 ***3 cr.***

The course emphasizes the importance of transportation and identifies the modes used for people and goods in various environments. The structure, support, propulsion, guidance, control, and infrastructure systems for various forms of transportation are addressed. Materials adapted to the State framework for Technology Education for classroom and lab use are integrated throughout the course. The course includes lab work.

Curriculum Development for Technology Education

ITEC 8900 ***3 cr.***

The course is designed for those seeking standard certification in Technology Education. Students learn to design courses and curriculum that include current trends in Technology Education. Several approaches for implementing problem solving, concept learning, habits of the mind, and integration of math/science concepts into the State framework areas of construction, communication, manufacturing, and power/energy in Technology Education are covered. The implementation of the State framework competencies for Technology are addressed.

Internship

ITEC 9500 ***6 cr.***

The internship is a clinical, capstone experience allowing full integration and application of content knowledge and pedagogical theory and practice. It should incorporate all standards specific to the discipline in which certification is sought as well as all common standards for classroom teachers (section 7.04). It must be a minimum of 400 clock hours or one full semester on site under the auspices of the college.

Faculty, Trustees, Administration

Full Time Faculty and Librarians

Key

★ Graduate Faculty Appointments

◆ Associate Graduate Faculty Appointments

★ **ADAMS, Roberta E.**
BA University of Michigan
MA Indiana University
MA University of Massachusetts
PhD Indiana University
Associate Professor, English. 1988

ADDORISIO, Rose Ann
BSEd Fitchburg State College
MEd Fitchburg State College
Assistant Professor, McKay Campus School. 1969

★ **ALBERGHENE, Janice M.**
BA University of Massachusetts
PhD Brown University
Professor, English. 1988

★ **ALONSO, Harriet Hyman**
BS New York University
MA New York University
MA Sarah Lawrence College
PhD State University of New York at Stony Brook
Professor, History. 1989

ANDERSON, Francine
AB Regis College
MEd Boston University
MEd Fitchburg State College
Associate Dean/Principal, McKay Campus School. 1996

★ **ANDERSON, Neal**
AB University of Utah
MS University of Utah
PhD Cornell
Professor, Biology. 1970

ANDREWS, James
BSEd Fitchburg State College
MEd Fitchburg State College
CAGS University of Connecticut
Assistant Professor, Industrial Technology. 1975

ANTAYA, David
BS University of Massachusetts
MA University of No. Colorado
EdD University of Massachusetts
Associate Professor, Physical Education. 1981

ARCHAMBEAULT, Frank
BS Worcester Polytechnic Institute
MS Worcester Polytechnic Institute
MS Worcester State College
Assistant Professor, Computer Science. 1986

ARES, Henry
BA University of Moncton (Canada)
MEd Fitchburg State College
Assistant Professor, McKay Campus School. 1970

ARMSTRONG, Cheryl
BA Boston College
MA University of Connecticut
PhD University of Connecticut
Assistant Professor, Psychology. 1994

★ **ARMSTRONG, Edward T.**
BS Pennsylvania State University
MS Louisiana State University
Associate Professor, Biology. 1988

ARYEE, Augustine
BA Northeastern University
MA Northeastern University
PhD Boston University
Professor, Sociology. 1982

★ **BABICH, George**
AB Atlantic Union College
MS Loma Linda University
MS University of New Hampshire
PhD University of New Hampshire
Professor and Graduate Program Director, Biology. 1978

★ **BARBARESI, Patricia**
BSEd Fitchburg State Teachers College
MA University of Connecticut
CAES Boston College
PhD Cornell University
Professor and Graduate Program Chair, Education. 1965

★ **BARBATO, James**
AB Assumption College
MA Clark University
PhD Boston University
Professor, Geo/Physical Sciences. 1972

BATTINELLI, Thomas
AA Boston University
BS Boston University
MEd Boston College
CAGS Boston University
EdD Boston University
Chairperson and Professor, Physical Education. 1960

BECHIS, Donna
BFA Hunter College
MFA University of Pennsylvania
Professor, Art. 1974

BENTLEY, Robert
BA Wayne State University
MA Wayne State University
Assistant Professor, Mathematics. 1977

★ **BERNSTEIN, Alan**
BA Hofstra University
MA University of New Hampshire
PhD Tufts University
Professor. Psychology. 1969

★ **BISK, Richard**
BA Drew University
MS University of New Hampshire
ASA Society of Actuaries
PhD Clark University
Professor, Mathematics. 1982

BLAKE, Simone E.
BA Fitchburg State College
MS Simmons College
Associate Librarian, Library. 1991

★ **BLOOMFIELD, Michael**
BS Cornell University
MEd Antioch University
EdD University of Massachusetts
Assistant Professor, Psychology. 1996

★ **BOHRER, George F.**
BA SUNY at Fredonia
MAT Keene State College
PhD University of Massachusetts
Professor and Undergraduate Evening Program Manager, Communications/Media. 1985

BOISVERT, Dorothy
BS Merrimack College
MEd University of Lowell
CAGS University of Lowell
EdD University of Massachusetts, Lowell
Chairperson and Professor, Clinical Laboratory Sciences. 1983

★ **BOND, George**
AB Dartmouth College
MS University of Rhode Island
PhD University of Rhode Island
Professor, Biology. 1973

BOURN, Colin
AB St. Michael's College
MEd Fitchburg State College
MA University of Massachusetts
Associate Professor, English. 1965

★ **BREEN, G. Jefferson**
AB Clark University
MA Clark University
EdD Clark University
Professor, Psychology. 1971

★ **BROWNLEE, Sibyl Ventress**
BA California State College at LA
MA California State University at LA
PhD University of Massachusetts
Assistant Professor, History. 1993

★ **BUCHOLC, Stanley**
BA Glassboro State College
MA W. Virginia University
EdD W. Virginia University
Chairperson and Associate Professor and Graduate Program Chair, Industrial Technology. 1976

BUDD, Eric
BA Brandeis University
MA University of Chicago
PhD University of Chicago
Assistant Professor, Political Science. 1994

BUDZ, Judith
BA University of Michigan
MA Tufts University
MBA Clark University
PhD Northwestern University
Professor, English. 1971

CAGGIANO, Diane P.
AA Cape Cod Community College
BS Babson College
MBA Babson College
Associate Professor, Business Administration. 1983

★ **CAMMUSO, Barbara**
AS Quinsigamond Community College
BSN Worcester State College
MSN University of Lowell
PhD Duisbuch University
PhD Clark University
Associate Professor, Nursing. 1992

CAREY, David A.
BA St. Michael's College
MS University of Massachusetts
MBA Anna Maria College
Assistant Professor,
Business Administration. 1980

CASE, George
BA College of Wooster
MA University of Massachusetts
Assistant Professor, English. 1964

CATALANO, Anne Marie
BS State University of New York
MS Boston University
Instructor, Nursing. 1992

★ **CHAMPLIN, Robert**
BS Bridgewater State College
EdM Boston University
PhD Ohio State University
Professor and Graduate Program Chair,
Geo/Physical Sciences. 1972

CHAPMAN, Joanne
BS Boston University
MS University of Lowell
Assistant Professor, Nursing. 1991

CHARLAND, Sylvia
BS University of Massachusetts
MBA University of Massachusetts
Associate Professor and Undergraduate
Evening Program Manager,
Business Administration. 1984

★ **CHISUNKA, Chola**
BA University of Zambia
MA Syracuse University
PhD Syracuse University
Associate Professor, English. 1991

CIOTTONE, Judith L.
BS College of St. Elizabeth
MA Clark University
PhD Clark University
Chairperson and Professor, Chemistry. 1982

★ **COFFMAN, Ralph J.**
BA Trinity College
EdM Boston University
MS Simmons College
M Div Andover Newton Theological School
PhD Harvard University
Associate Professor, History. 1991

COLBERT, James, Jr.
BA Lateran University, Rome, Italy
MA University of Barcelona, Spain
PhD University of Navarre, Pamplona, Spain
Professor, Philosophy. 1967

★ **COLBERT, Ronald**
BSEd Fitchburg State College
MEd Fitchburg State College
EdD Boston University
Chairperson and Professor and Graduate
Program Chair, Education. 1989

CONE, Linda
BA Fitchburg State College
MLS University of Rhode Island
MEd Fitchburg State College
Librarian, Library. 1980

CONLIN, James
BA Dartmouth College
MBA University of Pennsylvania
Assistant Professor,
Business Administration. 1982

★ **COSGROVE, Christine**
AB Mt. Holyoke College
MS Georgetown University
PhD Georgetown University
Professor, Mathematics. 1971

★ **COX, Howard B.**
BA University of Rhode Island
MBA Harvard University
PhD The Ohio State University
Professor, Business Administration. 1988

★ **CROSSON, Cynthia**
BA Western College for Women
MSW University of Connecticut
EdD University of Massachusetts
Professor, Human Services. 1978

CUNNINGHAM, Lee N.
BS Springfield College
MEd University of Massachusetts
DPE Springfield College
Chairperson and Professor, Physical
Education. 1967

★ **DECHENE, Lucy I.**
BS University of San Francisco
MS University of California at Riverside
PhD University of California at Riverside
Professor, Mathematics. 1978

DENIKE, Lee
BA State University of NY at Albany
MA State University of NY at Albany
MEd State University of NY at Buffalo
PhD Kent State University
Professor, Communications/Media. 1974

DEROSA, Laurie J.
BA Bridgewater State University
MA University of Massachusetts
Associate Professor,
McKay Campus School. 1989

DICK, Stanley
AB Brooklyn College
MA Harvard University
PhD Harvard University
Professor, Biology. 1971

DINDA, Robin D.
AB Davidson College
MMus University of Cincinnati
DMA University of Michigan
Associate Professor, Music. 1991

ERICKSON, LeAnn
BA University of Northern Iowa
MA University of Iowa
MFA University of Iowa
Assistant Professor,
Communications/Media. 1994

ERRISHI, Ali
BA University of Benghazi
MAS University of Benghazi
PhD Boston College
Associate Professor,
Philosophy and Geo/Physical Science. 1988

FIORENTINO, Michael
BSEd Fitchburg State College
MEd Boston University
EdD U Mass at Amherst
Assistant Professor, Special Education. 1974

FISK, Elizabeth Anne
BSEd Fitchburg State College
MSN Boston University
MOE University of New Hampshire
Associate Professor, Nursing. 1978

FISKE, Jane
BM New England Conservatory
MM New England Conservatory
DMA Boston University
Chairperson and Associate Professor,
Music. 1989

★ **FLIPPO, Rona F.**
BS Florida Atlantic University
MEd University of North Florida
EdS University of Florida
EdD University of Florida
Professor, Education. 1986

◆ **FLYNN, Katherine**
BSEd Fitchburg State Teachers College
MEd Fitchburg State Teachers College
CAGS University of Connecticut
Professor, Special Education. 1959

★ **FRANCIS, Elaine E.**
BSEd Fitchburg State College
MS Lesley College
EdD University of Massachusetts
Chairperson, Professor, and Graduate
Program Chair, Special Education. 1978

FREDETTE, Sheila
BSEd Fitchburg State Teachers College
MS University of Massachusetts
EdD University of Massachusetts
Professor, Nursing. 1974

GARDULA, Robert J.
BSed Bridgewater State College
MA Clark University
PhD Clark University
Chairperson and Professor, Geo/Physical
Sciences. 1973

★ **GIOVINO, Rosemarie**
BSEd Lowell State College
EdM Boston University
EdD Boston University
Professor, Special Education. 1972

★ **GIRLING, Paul**
AB Ottawa University
BD Andover Newton Theological School
STM Andover Newton Theological School
MA University of No. Colorado
EdD University of No. Colorado
Professor, Psychology. 1968

GLIDEWELL, Richard
BA Northern Illinois University
MA Northern Illinois University
PhD Southern Illinois University
Professor, Philosophy. 1973

★ **GLOBIANA, Carol**
BA University of Chicago
PhD Washington University
Professor and Graduate Program Chair,
Psychology. 1977

★ **GORDENSTEIN, Arnold**
BA University of Massachusetts
PhD Harvard University
Professor, English. 1989

GOVINDAN, Meledath
BSC University of Calicut
MSC University of Calicut
MS University of Kentucky
PhD University of Georgia
Associate Professor, Chemistry. 1996

GREENE, Robert W.
BSEd Worcester State Teachers College
MEd Northeastern University
PhD University of Connecticut
Associate Professor, Education. 1960

GREENE, Jeremiah E. Jr
AB Maryknoll Seminary College
MS Simmons College
Associate Librarian, Library. 1980

GRENACHE, David, G.
BS North Adams State College
BA North Adams State College
PhD Worcester Polytechnic Institute
Assistant Professor,
Clinical Laboratory Sciences. 1994

GUTH, Lawrence R.
BS Michigan Technological University
MS University of Utah
PhD Rice University
Assistant Professor,
Geo/Physical Science. 1993

★ **HANCOCK, John**
BS Ohio Northern University
MA Assumption College
CAGS Assumption College
PhD Professional School of Psychology
Chairperson and Associate Professor,
Psychology. 1992

★ **HARRELL, Sophia**
BSN Winston-Salem State College
MS Boston University
MA Assumption College
EdD University of Massachusetts
Chairperson and Professor, Nursing. 1970

★ **HARRIS, Irene**
AB Oberlin College
MS Columbia University
MEd Boston University
PhD Boston University
Professor, English. 1983

★ **HARTE, Lloyd M.**
BSEd Fitchburg State College
MEd Fitchburg State College
EdD University of Massachusetts
Associate Professor, Graduate Program Chair
and Undergraduate Evening Program
Manager, Industrial Technology. 1978

HAYES, Patricia
BA Simmons College
MA Northeastern University
PhD Northeastern University
Associate Professor, Sociology. 1973

HEMENWAY, John J.
MusB Houghton College
MEd University of Massachusetts
Instructor, McKay Campus School. 1994

★ **HETZEL, Charles**
BA Beloit College
MS University of Wisconsin
PhD University of Wisconsin
Professor, Education. 1987

★ **HIGDON, Gerald**
AB Villa Madonna College
MA University of Kentucky
PhD Lehigh University
MBA Northeastern University
Chairperson and Associate Professor,
Graduate Program Chair,
Mathematics. 1977

★ **HOEY, Margaret T.**
BS Emory University
PhD University of North Carolina
Assistant Professor, Biology. 1993

HOFFMAN, Elliot
BA Middlebury College
MS Boston University
Associate Professor,
Communications/Media. 1986

★ **HOGAN, Peter**
BA University of Wales, U.K.
PhD University of Bradford, U.K.
Professor, Psychology. 1982

HOOS, Gunther
BA Lawrence University
Assistant Professor,
Communications/Media. 1980

★ **HOTCHKISS, Anita**
BA City University of New York
PhD Hunter College of City University
of New York
Professor, Psychology. 1981

HOUSE, Bonnie
BFA Kutztown University
MFA Rochester Institute of Technology
Associate Professor,
Communications/Media. 1987

★ **HOWARD, Anne**
BS University of Connecticut
MEd Boston College
PhD Brandeis University
Associate Professor and Graduate Program
Co-Chair, Special Education. 1992

JARAMILLO, Maria
BA Universidad del Valle
MA Syracuse University
PhD Syracuse University
Professor, Spanish. 1986

JEFFKO, Walter
BS University of Bridgeport
MA Fordham University
PhD Fordham University
Professor, Philosophy. 1970

JELLISON, James
BS Northeastern University
MEd Fitchburg State College
Associate Professor,
McKay Campus School. 1972

JOHNSON, Gerald R.
BS University of Massachusetts
MS Purdue University
Associate Professor, Computer Science. 1979

KAUL, Pushkar N.
BS Kashmir University
MS Aligarh University
PhD Boston College
Chairperson and Professor, Chemistry. 1985

KAUL, Sanjay
BS University of Jammu
MS University of Jammu
MS University of Pennsylvania
PhD Indian Institute of Technology
Associate Professor,
Industrial Technology. 1991

★ **KELLY, Nancy**
PhB Wayne State University
MAT Fitchburg State College
PhD University of Massachusetts
Associate Professor and MAT-Education
Coordinator, English. 1992

★ **KEMPERS, Margot**
BA Brandeis University
MA Stanford University
PhD Brandeis University
Professor, Sociology. 1986

★ **KEOUGH, William**
AB Harvard University
MA Iowa University
MFA Iowa University
PhD University of Massachusetts
Professor, English. 1969

★ **KING, Mary A.**
BSEd Worcester State College
MA Anna Maria College
CAGS Anna Maria College
EdD University of Massachusetts
Professor, Human Services. 1980

KOKERNAK, Robert
BS Worcester Polytechnic Institute
MS Stanford University
PhD Worcester Polytechnic Institute
Professor and Raytheon Program Manager,
Industrial Technology. 1974

Key
★ Graduate Faculty Appointments
◆ Associate Graduate Faculty Appointments

KOLB, Liana
AB Douglas College
BSEd Fitchburg State College
MS Simmons College
MEd Boston University
Assistant Professor,
McKay Campus School. 1971

KRANE, Stanley
BS City College of New York
MS Michigan State University
PhD California Institute of Technology
Professor, Biology. 1975

KRUSE, Richard
BA Dennison University
MEd Boston University
MEd Cambridge College
CAGS Boston University
Assistant Professor, Psychology. 1967

LANDER, Frits
Academy Engineer
Engineering Academy of Denmark
Associate Professor, Computer Science. 1982

LAYTIN, Peter
BA University of Wisconsin
MA State University of New York at Buffalo
Professor, Communications/Media. 1977

★ **LIEBERMAN, Benjamin**
BA Yale University
MA University of Chicago
PhD University of Chicago
Assistant Professor, History. 1993

★ **LIGHT, Barry**
BA Lebanon Valley College
MA Louisiana State University
EdD Pennsylvania State University
Professor, Mathematics. 1973

LU, Da-hong
Diploma, University of Science and
Technology of Shanghai, China
PhD Wayne State University
Associate Professor, Chemistry. 1991

★ **LWAMUGIRA, Pirudas L.**
BA University of East Africa
MBA St. Joseph's University
PhD Temple University
Associate Professor, Economics. 1991

McALOON, Joseph
BA University of New Hampshire
MBA University of South Dakota
MSPA University of Massachusetts
Associate Professor,
Business Administration. 1984

★ **McANDREW, Claire**
BA Marywood College
MA Georgetown University
EdD Lehigh University
Associate Professor, Mathematics. 1983

★ **McCAFFREY, Marilyn**
B Ed Rhode Island College
MA Brown University
EdD Boston University
Professor and Graduate Program Chair,
English. 1971

McELVAIN, Richard C.
BA Marquette University
MFA Boston University
Associate Professor, English/Theater. 1997

★ **McGUIRE, Robert**
BA St. John Fisher College
MS University of Kentucky
PhD University of Rochester School of
Medicine and Dentistry
Chairperson, Graduate Program Chair and
Professor, Computer Sciences. 1982

McKAY, Linda
BSN St. Anselm's College
MS Russell Sage
Associate Professor, Nursing. 1981

McKEON, John J.
ABA Worcester Junior College
BS Southern Illinois University
MS Southern Illinois University
Assistant Professor, Economics. 1979

McSHEEHY, Bruce R.
AA Worcester Jr. College
BA American International College
MLS University of Rhode Island
MA Assumption College
Senior Librarian, Library. 1979

★ **MADDEN, Barbara Power**
BS Boston College
MS Boston College
EdD Northeastern University
Professor and Graduate Program Chair,
Nursing. 1979

★ **MAHADEV, Aparna**
MSc Madras Christian College
MS Indian Institute of Technology
PhD University of Waterloo
Professor and Undergraduate Evening
Program Manager,
Computer Science. 1987

MALONEY, David
BS Worcester State College
MA Assumption College
CAGS Assumption College
EdD Clark University Professor,
Psychology. 1970

MANEY, Elizabeth
BSEd Boston University
MEd Fitchburg State College
Assistant Professor,
McKay Campus School. 1958

MARION, Mildred
BSEd Fitchburg State College
MA Assumption College
MS University of Massachusetts
Associate Professor, Nursing. 1989

★ **MARTENS, Edward**
BS Massachusetts Institute of Technology
MS Massachusetts Institute of Technology
PhD Massachusetts Institute of Technology
Associate Professor,
Industrial Technology. 1971

★ **MARTYNIUK, Irene**
BA Kent State University
MA Kent State University
PhD University of South Carolina
Assistant Professor, English. 1996

★ **MAY, Anne**
BSEd Fitchburg State College
EdM Boston College
CAGS Boston College
EdD Boston University
Professor, Special Education. 1956

MAY, Barbara
BS Boston College
MEd Fitchburg State College
MS Boston University
Associate Professor, Nursing. 1974

MAY, Elizabeth
BSEd Fitchburg State Teachers College
MS Boston College
Associate Professor, Nursing. 1970

★ **MICCICHE, Pasquale**
BS Boston College
AB Boston College
MEd Boston College
MA University of Minnesota
PhD Boston University
Chairperson and Professor, History. 1969

★ **MILLER, George**
BA Eastern Michigan University
MA Eastern Michigan University
PhD University of Michigan
Professor, Education. 1972

★ **MILLER-JACOBS, Sandra**
BA Queens College
MEd Boston University
EdD Boston College
Professor, Special Education. 1973

MOORE, Jeanne
BS Millersville State College
Certificate, Marburg University, Germany
MA Tufts University
PhD Tufts University
Professor, French and German. 1970

MORGAN, Kelly C.
AA Casper College
BA Viterbo College
MFA Case Western Reserve University
Associate Professor, English/Theater. 1997

MORRISON, Francis D.
AB University of Massachusetts
JD Boston College
Assistant Professor,
Business Administration. 1979

★ **MRVICA, Ann R.**
BA Ryerson Polytechnical Institute
MEd Worcester State College
EdD University of Massachusetts
Associate Professor,
Communications/Media. 1983

★ **MUNSON, Wayne**
BFA University of Connecticut,
School of Fine Arts
MA University of Connecticut,
School of Fine Arts
PhD New York University
Chairperson and Associate Professor,
Communications/Media. 1991

★ **MURPHY, Caroline**
AB Regis College
AM Clark University
PhD Clark University
Professor, Economics. 1971

★ **MURRAY, Thomas**
BA Iona College
MA Harvard University
PhD Harvard University
Professor, English. 1986

NEUNHERZ, Rose Marie
BS Beaver College
MS Southern Connecticut State College
MS Northeastern University
Professor, Biology. 1967

NOLE, Barbara
BSEd Bridgewater State College
MSPE University of North Carolina
Assistant Professor, Physical Education. 1970

★ **NOMISHAN, Daniel A.**
NCE University of Lagos
BS Morgan State University
EdD Indiana University of Pennsylvania
Associate Professor, Education. 1991

◆ **NOONAN, James**
BS Suffolk University
MBA Suffolk University
MSBE Suffolk University
Chairperson and Associate Professor, Business Administration. 1981

NWANKWO, Jason
BS University of Nigeria
MS University of Wisconsin
PhD University of Wisconsin
Assistant Professor, Sociology. 1995

OBERMEYER-SIMMONS, Helen
BFA Stephens College
MFA Rochester Institute of Technology
Professor, Communications/Media. 1981

O'MALLEY, Alice T.
BA Anna Maria College
MA Clark University
PhD Clark University
Associate Professor, Biology. 1965

OUELLETTE, Janice A.
BSE Westfield State College
MLS SUNY Albany
Associate Librarian, Library. 1981

PATTERSON, Frank
BA Trenton State College
MM Temple University
PhD University of Connecticut
Professor, Music. 1968

★ **PAUL, John J.**
BRE William Tyndale College
MA Trinity Evangelical Divinity School
MA University of Wisconsin
PhD University of Wisconsin
Associate Professor, History. 1991

PHELPS, Edson H.
BS Clark University
MEd Fitchburg State College
CAGS Fitchburg State College
Assistant Professor, Industrial Technology. 1979

PICARD, Carol
BS Fitchburg State College
MS Boston College
Associate Professor, Nursing. 1981

POWERS, Barbara
BS University of North Carolina
MS Boston College
Assistant Professor, Nursing. 1974

PURCELL, Janette M.
AAS Ulster County Community College
BS University of Colorado at Boulder
PhD University of Colorado at Boulder
Associate Professor and Graduate Program Chair, Business Administration. 1995

RATNEY, Tanya E.
BA Hunter College
MN Yale University
MS Boston University
EdD Boston University
Associate Professor, Nursing. 1981

ROBINSON, Daniel
BS Fitchburg State College
PhD University of the Pacific
Professor, Chemistry. 1977

ROGUSKI, Wanda
BS Quinnipiac College
MS Long Island University
DA The Catholic University of America
Associate Professor, Clinical Laboratory Sciences. 1990

★ **RUWE, Donelle**
BA Boise State University
MA Boise State University
PhD University of Notre Dame
Assistant Professor, English. 1996

RYDER, David
BSEd Fitchburg State Teachers College
MA University of Maryland
EdD Boston University
Professor, Communications/Media. 1963

SCANNELL, Ann
BSN Villanova University
MSN Catholic University
ND Case Western Reserve University
Assistant Professor, Nursing. 1996

SCHARF, Jeannette
Licenciada en Literatura, University Nac. Cordoba, Argentina
MA Queens College (CUNY)
Associate Professor, Spanish. 1973

SCHONBECK, Harold
BS University of Connecticut
MBA Clark University CPA
Associate Professor, Business Administration. 1977

SHAUGHNESSY, Robert
BSEd Fitchburg State Teachers College
EdM Fitchburg State Teachers College
MNS Worcester Polytechnic Institute
Professor, Computer Science. 1966

SHAW, Elizabeth
BS Skidmore College
MS Boston University
Assistant Professor, Nursing. 1982

SHEA, Timothy P.
BS Boston College
MBA Indiana University
PhD Boston University
Assistant Professor, Business Administration. 1995

SHEEHAN, James
BS Boston University
EdM Boston University
Associate Professor, Physical Education. 1973

SICKUL, Caryl
BA Hofstra College
MSE Queens College
MMT Antioch College
Professor, Physical Education. 1981

SIDES, Charles
BA Clemson University
MA Clemson University
PhD University of Massachusetts
Professor, Communications/Media. 1990

★ **SNYDER, Mark A.**
BS M.I.T.
MS Columbia University
PhD Yale University
Assistant Professor, Mathematics. 1993

SOLIN, John
BA Saint Johns University
MA Brandeis University
MEd Boston State College
Assistant Professor, Psychology. 1988

★ **SPENCER, Richard**
BA Alfred University
MA Alfred University
PhD State University of New York at Buffalo
Professor and Gradnate Program Chair, Psychology. 1972

★ **STOKES, Shari**
BA Oberlin College
MA Columbia University
MEd Columbia University
EdD Columbia University
Professor, Special Education. 1991

★ **STRADER, William**
BA Hope College
MEd William Paterson College
EdD University of Massachusetts
Professor, Education. 1986

SUSKIND, Diana
BS State University of New York
MS Syracuse University
EdD University of Illinois
Assistant Professor, Education. 1991

SZYMCZAK, Elizabeth G.
BS University of Rhode Island
MS Northeastern University
Assistant Professor, Clinical Laboratory Sciences. 1987

Key
★ Gradnate Faculty Appointments
◆ Associate Graduate Faculty Appointments

TABOR, Luther G.
BA University of New Hampshire
MEd Colorado State University
PhD Colorado State University
Professor, Industrial Technology. 1985

★ **TAPPLY, Robert**
BSEd Fitchburg State Teachers College
EdM Fitchburg State Teachers College
Associate Professor, English. 1966

THERRIEN, Steven P.
BSE Fitchburg State College
MNS Worcester Polytechnic Institute
Assistant Professor and Nypro Program Coordinator,
Industrial Technology. 1981

THOMAS, Edmund
BS John Carroll University
MA Kent State University
PhD Clark University
Professor, History. 1967

★ **THOMAS, Howard**
BS State University of New York at Geneseo
MS Adelphi University
PhD Northeastern University
Professor, Biology. 1981

TRIFILO, Richard
BA Fitchburg State College
BS University of Massachusetts
MS Boston College
Assistant Professor, Nursing. 1983

TURK, Michael
AB Princeton University
MA Harvard University
PhD Harvard University
Associate Professor, Economics. 1982

TURNBULL, Eleanor
BS Skidmore College
MS University of Colorado
PhD University of Massachusetts
Assistant Professor, Nursing. 1995

VALANEJAD, Esmail
BSC University of Birmingham (England)
PhD Princeton University
Professor, Geo/Physical Sciences. 1968

★ **VOSTOK, Gary**
BS Clark University
MBA Babson College
CPA, CMA, Assistant Professor,
Business Administration. 1979

WADSWORTH, Susan
AB Colby College
MA Tufts University
MFA Cranbrook Academy of Art
Assistant Professor, Art. 1992

WAGNER, A. Lynne
BS University of Massachusetts
MS University of Lowell
Associate Professor, Nursing. 1985

★ **WALLEN, Andrea**
BSN San Francisco State University
MSN University of California
EdD University of Massachusetts
Professor, Nursing. 1977

WELCH, Robert
BS Emerson College
MS Emerson College
PhD Pennsylvania State University
Professor, Speech. 1968

WELLENS, Charles H.
BS San Diego State University
MBA Bryant College
Associate Professor,
Business Administration. 1983

WELLMAN, Robert
BA University of California
MS Long Island University
PhD University of Connecticut
Assistant Professor, Human Services. 1995

★ **WIEGERSMA, Nancy**
BS University of Maryland
MA University of Maryland
PhD University of Maryland
Professor, Economics. 1979

★ **WILLIAMS, Susan**
BA University of Denver
PhD University of Delaware
Assistant Professor and Graduate Program Chair, History. 1993

WORFOLK, Jean B.
BSN Medical College of Virginia
MS Western Connecticut State College
MS Boston University
EdD University of Massachusetts
Associate Professor, Nursing. 1985

★ **YEE, Nancy**
BA Catholic University of America
MA Catholic University of America
PhD Boston University
Chairperson and Professor, English. 1981

YU, Jiang
BS University of Science and Technology of China
MS Western Michigan University
PhD Western Michigan University
Assistant Professor,
Geo/Physical Sciences. 1996

★ **ZEKERIA, Abdulkeni**
BS University of Asmara
MS University of Wyoming
PhD Howard University
Associate Professor, Mathematics. 1987

★ **ZIVIC, Louis**
BA Michigan State
MS Cornell University
EdD Vanderbilt University
Professor, Business Administration. 1989

★ **ZOTTOLI, Robert**
BA Bowdoin College
MS University of New Hampshire
PhD University of New Hampshire
Chairperson and Professor, Biology. 1965

Part-Time Faculty

BRADY, Michele
BSN Boston University
MSN Boston University
Part-time Instructor, Nursing. 1989

KRESSY, Jean
BS Columbia University
MS University of Massachusetts
Part-time Instructor, Nursing. 1973

LISTON, Gail
MSN Boston University
BSN Texas Christian University
Part-time Instructor, Nursing. 1977

MARIOLIS, Tara
BS Hartwick College
MS Boston University
Part-time Instructor, Nursing. 1992

MIZHIR, Judith
BS Boston University
MS Boston University
Part-time Instructor, Nursing. 1974

Clinical Faculty

BUSHMAN, Eleanor O.
Emerson Hospital
BA Framingham State
MBA Simmons College

CROTEAU, Theresa
Henry Heywood Memorial Hospital
BS Fitchburg State College

DIMEO, Carol
Cambridge Hospital
BS Pennsylvania State University

KELLER, Dieter
Henry Heywood Memorial Hospital
BA Amherst College
MD Tufts University

MARCH, Robert
Worcester School for Professional Crafts
BFA Rhode Island School of Design
MFA Rochester Institute of Technology, School for American Craftsmen

MILLER, Carlotta
Worcester School for Professional Crafts
MFA University of Massachusetts at Dartmouth

NELSON, Sarah
Worcester School for Professional Crafts
BFS Mankato State University
MFA University of Wisconsin, Madison

O'MALLEY, Thomas
Worcester School for Professional Crafts
BFA Alfred University
MFA Rhode Island School of Design

SHEPERO, Michelle
Clinitech Services
BS Fitchburg State College

Adjunct Graduate Faculty

Membership on the Adjunct Graduate Faculty is open, by invitation, to qualified and competent experts, external to the Fitchburg State College faculty, who possess skills, education, and experience in academic and/or professional areas which complement the Graduate and the Associate Graduate Faculties, and who have had two successful department evaluations.

BRADY, Kathryn
BS Fitchburg State College
MA University of Northern Colorado
Visiting Lecturer, Special Education. 1989

BOTHWELL, H., Roger
BA Andrews University
MAT Andrews University
PhD Drake University
Visiting Lecturer, Education. 1995

BOUVIER, David
BS Fitchburg State College
MEd Rhode Island College
MEd Fitchburg State College
Visiting Lecturer, Technology Education. 1995

COLEMAN, Steven
BA Fitchburg State College
PhD Cornell University
Visiting Lecturer, Psychology.

CREEOON, Chandler
BA St. Anselm College
MA, CAGS, Anna Maria College
Visiting Lecturer, Psychology. 1989

CULVER, Henry
BS Worcester State College
MA Assumption College
EdD University of Massachusetts at Amherst
Visiting Lecturer, Psychology, 1994 and Criminal Justice, 1996.

FRECHETTE, Stephen
BS Central New England College
MS Fitchburg State College
Visiting Lecturer, Computer Science. 1990

GALLO, Melanie
BA University of Massachusetts
MEd Fitchburg State College
Visiting Lecturer, English. 1997

GAUMOND, John
McKay Campus School
BS, MEd, Worcester State College
MA, Syracuse University
Associate Professor, Education. 1969

HILL, Pamela
BA Framingham State College
MAT Theatre Ed., Bridgewater State College
Visiting Lecturer, English. 1996

JOSEPH, Ruth
BS, HSS Ohio University
MEd Boston College
EdD University of Massachusetts at Lowell
Visiting Lecturer, Special Education.

LAWRENCE, James
AB Central Michigan University
MA Boston College
Visiting Lecturer, Psychology.

McOERMOTT, James
BA College of the Holy Cross
MA Clark University
EdD Clark University
Visiting Lecturer, English. 1997

O'CONNELL, Denise
BS Fitchburg State College
MEd Fitchburg State College
EdD University of Massachusetts
Visiting Lecturer, Special Education. 1992

O'MALLEY, Kevin P.
BSEd Boston State College
MEd Suffolk University
EdD University of Massachusetts. 1990

PAWLOUSKI, Paul
BA Fitchburg State College
MEd West Virginia University
EdD West Virginia University
Visiting Lecturer, Technology Education. 1996

ROBBINS, Patricia
BS Washington State University
BA Eastern Washington State University
MEd Eastern Washington State University
MEd Central Washington State University
EdD University of San Francisco
Visiting Lecturer, Educational Leadership and Management.

ROSSNER, Albert
BS Fitchburg State College
MEd Bowling Green State University
Visiting Lecturer, Technology Education. 1996

RYAN, Carol
BS Fitchburg State College
MEd Fitchburg State College
Visiting Lecturer, Psychology.

SCHOFIELD, Ronald
BS Worcester State College
MA Assumption College
Visiting Lecturer, English. 1992

SNYER, Kristen, Esq.
BA College of the Holy Cross
JD Suffolk University Law
Visiting Lecturer, Educational Leadership and Management. 1994

THIBADEAU, Susan
BS Emmanuel College
MEd Rhode Island College
PhD University of Kansas. 1990

VAN DE CARR, Therese
BSEd State University College, Genesco
MEd Boston College
EdD Boston University. 1993

WILLIAMS, Miriam
BA Brandeis University
MA Clark University
Visiting Lecturer, Psychology. 1997

ZIOE, Elliot
BA Duke University
JD Boston University
Visiting Lecturer, Management. 1976

Adjunct Undergraduate Faculty

All Fitchburg State College Undergraduate Faculty members by virtue of their college appointment are eligible to teach in the Division of Continuing Education. In addition, membership on the Undergraduate Adjunct Faculty is open, by invitation, to qualified and competent experts, external to the Fitchburg State College faculty, who possess skills, education, and experience in academic and/or professional areas, and who have taught a minimum of eight undergraduate courses during the previous three academic years.

BAIL, Paul L.
BS University of Massachusetts
AM, PhD University of Michigan
Visiting Lecturer, Psychology. 1989

BERNAL, Leslie
AB San Jose State College
EdM, CAGS, EdD Boston University
Visiting Lecturer, Education. 1984

BROWNLEE, Charles
BS California State University
JD Boalt Hall School of Law
Visiting Lecturer,
Business Administration. 1988, and
Criminal Justice. 1996.

BURNS, William
BA Lowell State College
MEd University of Lowell
Visiting Lecturer, Vocational Education. 1984

CONNELL, Beverly
BS Salem State College
MS Fitchburg State College
Visiting Lecturer,
Business Administration. 1994

CRAWLEY, John
BS Central Connecticut State University
MS Lesley College
JD New England School of Law
Visiting Lecturer,
Business Administration. 1990

DEPROSPO, Helen
BS, BA Clark University
MBA University of Massachusetts
Visiting Lecturer,
Business Administration. 1989

DZERKACZ, John
BA Framingham State College
MEd Boston College
Visiting Lecturer, Vocational Education. 1993

GASKINS, Leonard
BA Central State College
MM Boston University
CAGS Boston State College
Visiting Lecturer, Humanities. 1989

KALIA, Tejendra
BEd Banaras Hindu University
MEd McGill University
MBA Anna Maria College
Visiting Lecturer,
Business Administration. 1990

KELLEY, Timothy
BA Holy Cross College
MS University of Lowell
Visiting Lecturer, Mathematics. 1986

KINNEY, Donald
BET Central New England College
MBA Anna Maria College
Visiting Lecturer,
Business Administration. 1989

L'HEUREUX, Michael
BA Assumption College
MA Western Kentucky University
Visiting Lecturer, Geo/Physical Sciences. 1989

LONGEY, Suzanne
BS University of Connecticut
MEd Fitchburg State College
Visiting Lecturer, Humanities. 1992

MATALKA, Edward
BS Rensselaer Polytechnic Institute
MS, PhD University of Florida
Visiting Lecturer, Psychology. 1989

OLSON, Anthony
BS Fitchburg State College
MBA Rivier College
Visiting Lecturer,
Business Administration. 1989

PANAGIOTES, Steven
BA Fitchburg State College
JD Vermont Law School
Visiting Lecturer,
Business Administration. 1989

PEACH, Robert
BS, MEd Salem State College
Visiting Lecturer, Vocational Education. 1992

PREGOT, Michael
BA St. Francis College (NYC)
MAT Assumption College
MA Framingham State College
EdD Boston University
Visiting Lecturer, Humanities. 1989

QUINN, Dennis
BA Worcester State College
MA Assumption College
Visiting Lecturer, English. 1987

SCAPPARONE, Renee
AA Mount Wachusett Community College
BS Fitchburg State College
MBA Anna Maria College
Visiting Lecturer,
Business Administration. 1990

★ **THOMAS, Teresa**
BS Fitchburg State College
MA Clark University
PhD Clark University

TOMPKINS, Elbert L.
BA West Chester State College
MA, EdD, Columbia University
Visiting Lecturer,
Business Administration. 1984

TRIPP, Gary
BS, BA Nichols College
MA Pennsylvania State University
Visiting Lecturer, Economics. 1984

ZIDE, Elliot
BA Duke University
JD Boston University
Visiting Lecturer,
Business Administration. 1976

Professors Emeriti

ARNOLD, Lawrence
Professor Emeritus of History

ANGELINI, Joseph A.
CAGS Professor Emeritus of Mathematics

BANNON, Lillian
MA Professor Emerita of Nursing

BESNIA, Howard J.
MFA Professor Emeritus of Industrial Technology

BOURSY, John
CAGS Professor Emeritus of Business Administration

BOWERS, William A.
EdD Professor Emeritus of Communications/ Media

BROWNING, Grainger
PhD Professor Emeritus of Sociology

CARPENTER, Joseph
MEd Professor Emeritus of Industrial Technology

CARSON, Norman
MS Professor Emeritus of History

CASEY, William
MS Professor Emeritus of Library

CONDIKE, George
PhD Professor Emeritus of Chemistry

CONDON, Richard
EdM Professor Emeritus of Mathematics

COX, Catherine
AM Professor Emerita of Geography

CROWLEY, Harry L.
EdD Professor Emeritus of Behavioral Science

DECESARE, Richard A.
PhD Professor Emeritus of Humanities

DEAN, Veva K.
PhD Professor Emerita of Geography

DRISCOLL, Edward F.
PhD Professor Emeritus of Industrial Arts

DRISCOLL, Rita D.
EdD Professor Emerita of Nursing

DUFAULT, John
PhD Professor Emeritus of Behavioral Science

FARIAS, Joseph C.
MEd Professor Emeritus of Industrial Arts

FITZGIBBON, William H.
EdM Professor Emeritus of Communications/ Media

GOLDMAN, William J.
EdD Professor Emeritus of Special Education

GRABAR, Terry
PhD Professor Emerita of English

GREEN, Anne
MEd Professor Emerita of Elementary Education

GREEN, Phyllis H.
PhD Professor Emerita of Nursing

GUINDON, Francis X.
EdD Professor Emeritus

HANSON, Erling
EdM Professor Emeritus of Industrial Technology

HARROD, Walter F.
EdM Professor Emeritus of Industrial Arts

HASKINS, Elizabeth M.
MS Professor Emerita of Mathematics

JAMES, George
EdD Professor Emeritus of Industrial Technology

KENT, Richard
DMA Professor Emeritus of Music

KRAWIEC, Bernice M.
MS Professor Emerita of Nursing

LEE, Robert R.
EdD Professor Emeritus of Humanities

LOCKE, Norman C.
MEd Professor Emeritus of Communications/ Media

LYSTILA, Doris V.
MEd Professor Emerita of Education

McAVOY-WEISSMAN, Muriel G.
PhD Professor Emerita of History

McDOWELL, Margaret M.
MEd Professor Emerita of Education

McGRAIL, John P.
MA Professor Emeritus of English

McMURRAY, Philip A.
EdM Professor Emeritus of Education

MAZEIKA, John J.
MEd Professor Emeritus of Counseling

MELVIN, Harold
ThD Professor Emeritus of Sociology

MERRIAM, George H.
PhD Professor Emeritus of History

MILLER, Frederick R.
MEd, CAGS Professor Emeritus of Industrial Technology

MOON, John V.
PhD Professor Emeritus of History

MORELAND, Hattie W.
EdD Professor Emerita of Special Education

O'CONNOR, Katharine
CAGS Professor Emerita of Nursing

OVIAN, Lawrence A.
EdD Professor Emeritus of Industrial Technology

PASSIOS, Irene
MEd Professor Emerita of Education

POWERS, Francis P.
EdD Professor Emeritus of Education

ROACHE, Mary L.
EdM Professor Emerita of Education

SIMMONS, Anna G.
AM Professor Emerita of Geography

SIPILA, Signe Antila
EdM Professor Emerita of Education

HOROWITZ, Lillian
EdM Professor Emerita of English

TAYLOR, Margaret S.
DNSc Professor Emerita of Nursing

TAYLOR, Rowena
MS Professor Emerita of Nursing

THOMAS, Rene
MEd Professor Emeritus of Industrial Technology

Trustees and Administrators

Board of Trustees

NORMAN W. MAY
3/1/97, Chair, (Reappt.) 3/1/02

CHARLES A. GELINAS
3/1/00, Vice Chair

DR. ALBERTA S. BELL
3/1/96, Secretary, (Reappt.) 3/1/01

MARY E. BONIN
3/1/99

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3/1/02

JOHN R. CLEMENTI
3/1/97, (Reappt.) 3/1/02

PAUL E. COCHRANE, MD
3/1/99

JAMES P. HONAN
3/1/02

JOHN E. HOWARD
3/1/96, (Reappt.) 3/1/01

ROBERT B. McCARTHY
3/1/95, (Reappt.) 3/1/00

BRETT CONNOLLY
6/30/99, Student

Office of the President

MICHAEL P. RICCARDS
President
BA Rutgers University
MA Rutgers University
MPhil Rutgers University
PhD Rutgers University. 1995

TERRANCE J. CARROLL
Director, Institutional Research
AB Northeastern University
MEd Fitchburg State College. 1974

DEBORAH A. CASCIO
Staff Assistant, Administrative Assistant to the President. 1985

PAMELA FIORENTINO
Staff Assistant, Human Resources
AS Mount Wachusett Community College. 1971

ELIZABETH M. RODENHISER
Staff Associate, Administrative Services
Certificate, Salter Secretarial School. 1976

MARY E. SCOTT
Director of Human Resources/Affirmative Action
AB Boston College
MDiv Episcopal Divinity School
JD Western New England College. 1991

LISA H. WHEELER
Staff Assistant, Compensation and Benefits
AS Becker Junior College
BS Fitchburg State College. 1985

Academic Affairs

PATRICIA SPAKES
Vice President, Academic Affairs
BA Winthrop University
MSW University of South Carolina, Columbia
PhD University of Wisconsin, Madison. 1997

SHIRLEY A. WAGNER
Associate Vice President, Academic Affairs
BA State University of New York at Buffalo
MA University of Massachusetts
PhD University of Massachusetts. 1977

MICHELE MORAN ZIDE
Associate Vice President
BA Mount St. Mary College
MS Boston College
EdD University of Massachusetts. 1972

ROBERT McGANN
Dean of Enrollment Services
BA Franklin and Marshall College
MA University of Connecticut. 1996

LOUIS R. AMADIO
Consulting Executive Director for Development and Outreach
BEd Fitchburg State College
MEd Fitchburg State College
EdD University of Massachusetts (Amherst). 1994

FRANCINE M. ANDERSON
Associate Dean/Principal, McKay
BA Regis College
MEd Boston University
MA Fitchburg State College. 1996

NIKKI BROWNELL
Staff Associate, Community Outreach Manager
BA Fitchburg State College
MA Fitchburg State College. 1993

CINDY CAMPBELL
Admissions Counselor
BA Mount Union College
MEd Worcester State College. 1995

CATHERINE CANNEY
Director of Continuing Education
BS Bridgewater State College
MEd Fitchburg State College. 1984

JAMIE B. COCHRAN
Staff Assistant/Counselor, ACCESS
MS Educational Fellowship
BS Fitchburg State College. 1995

JAMES R. DUPONT
Director of Admissions
BA State University of New York at Buffalo
MA State University of New York at Albany. 1993

MICHAEL D. FERREIRA
Staff Assistant,
Center for Academic Computing
BS Fitchburg State College. 1988

CHERYL A. FLAGG
Assistant Director, Registration Information Systems
BA Shepherd College. 1995

DONNA L. FOLEY
Co-Coordinator, Academic Advising Center
BS Fitchburg State College
MS Fitchburg State College. 1988

ROBERT A. FOLEY
Director of the Library
AB Stonehill College
MSL Western Michigan University. 1979

CLAUDIA GALLANT
Director, Professional Development Programs
BA Emmanuel College
MA University of Michigan (Ann Arbor). 1994

SCOTT J. GAUTHIER
Assistant Director, Admissions
BS Franklin Pierce College
MS Fitchburg State College. 1986

RODERICK MALCOLM
Assistant Director, Admissions
BS Fitchburg State College. 1992

ELIZABETH MARTIN
Registrar
BM Berkley College of Music
MEd Keene State College. 1998

CAROL McFARLAND
Director, Upward Bound Program
BS State University of Buffalo
MEd Fitchburg State College. 1991

PIERINA MURRAY
School Nurse, McKay Campus School
BS Fitchburg State College. 1992

DAVID J. NEWTON
Staff Associate, Director of Grants Development
BA Syracuse University
MA Tufts University. 1993

JOAN NIEHAUS
Co-Coordinator, Academic Advising Center
AS Becker College. 1986

WILLA S. PETERSON
Director, Expanding Horizons
BA Boston University
MA/CAGS Assumption College. 1994

CHRISTINE PRATT
Systems Manager, Enrollment Services

KATHY RADLEY
Coordinator, Extended Instruction Programs
BS Fitchburg State College. 1998

ALVIN T. RILEY, JR.
Director, ACCESS
BS Bentley College
MRE Gordon-Conwell Theological Seminary
MDiv The Interdenominational Theological Center and Turner Theological Seminary
MA Atlanta University. 1987

HOWARD J. RIVERS
Staff Associate, Image Systems
Certificates: Main Photographic School, Nikon School Seminar. 1977

DEBRA ANN ROBERTS
Director, The Center of Leadership and Career Education
BS Fitchburg State College
MS Fitchburg State College. 1993

JAMES ROGER
Staff Associate/Manager, FSC Press
Journeyman. 1984

GERALD J. SAWYER
Staff Assistant, Center for Academic Computing
AS Mt. Wachusett Community College
BS Fitchburg State College. 1994

ALBERT TURNER
Staff Assistant, Counselor/ACCESS
BA Fitchburg State College. 1992

MARY CATHERINE WAGNER
Staff Assistant, Coordinator of Disability Services
BA University of Southern California
MS Fitchburg State College. 1997

JOANNE S. WALSH
Staff Assistant, Marketing and Recruiting
BFA University of Massachusetts at Amherst
MS Fitchburg State College. 1991

ROBERT WILSON
Staff Associate, Image Systems
BS University of Nebraska
MS Fitchburg State College. 1986

LINDA WINSLOW
Staff Assistant, Operations Manager
Certificate in Office Administration. 1989

COLIN W. YOUNG
Director, Center for Academic Computing
BA Beijing University United
Med Lehigh University
MS Lehigh University. 1996

Student Affairs

CHARLES R. RATTO
Vice President, Student Affairs
BS Holy Cross
MBA Boston College
MEd Boston College
EdD Boston College. 1990

ANN COYNE
Associate Vice President, Student Affairs and Dean of Students
BS Suffolk University
MA Boston College. 1992

SUE E. LAUDER
Director, Athletics
BS State University of New York at Cortland
MS Syracuse University. 1996

ROBERT BURKE
Staff Assistant, Athletic Trainer
BS Boston-Bouve College
BS Northeastern University. 1990

JACQUELINE REDLIN
Director, Health Services
AS Quinsigamond Community College
BS Worcester State College
MSN University of Massachusetts. 1991

ROBERT NEE
Physician, Health Services
BS St. Anselms College
MD St. Louis University School of Medicine. 1997

TULLIO Z. NIEMAN
Assistant Dean and Director, Campus Center/Student Activities
BA University of Maine/Farmington
MA University of Maine/Orono. 1996

BRIAN BICKNELL
Assistant Director, Campus Center/Student Activities
BS Fairmont State College. 1994

LISA DUBOSE
Assistant Director, Campus Center/Student Activities
BS Southern Methodist University
MA Oregon State University. 1995

ROBERT MURRAY
Director, Counseling Center
BA Boston College
MEd Boston College
EdD Boston University. 1994

DONNA GOODWILL
Staff Assistant/Counselor
BA Providence College
MSW Boston University. 1993
LICSW

KATHERINE LAROCCO
Counselor
BA University of Massachusetts Amherst
MSW Simmons College. 1992
LICSW

ANNIE PARKINSON
Substance Awareness Coordinator
MA Assumption College
BA Worcester State College. 1997

DOUGLAS SHERMAN
Director, Career Services
BA Cornell University
MA Lesley College. 1986

GRACELYN MATSON
Assistant Director, Career Services
MA State University of New York, College at Oswego
BA State University of New York, College at Oswego. 1994

CHRISTINE CORSELLO
Associate Dean and Director of Residence Life
BA University of Northern Iowa
MS Creighton University. 1992

ANESTI AGAPIADIS
Staff Assistant/Residence Director
BS Framingham State College. 1995

MELISSA LEMIEUX
Staff Assistant/Residence Director
BA Wheaton College. 1996

DEBORAH QUINLAN
Staff Assistant/Residence Director
BS Fitchburg State College. 1996

Finance

MICHAEL T. RIVARD
Vice President for Finance and Treasurer
AA Worcester Junior College
BS Boston University
MA Anna Maria College, 1966

MARY LYNN LEARY
Comptroller
AA Mount Wachusett Community College.
BS Fitchburg State College, 1972

KATHERINE CANNON
Director of Accounting, Treasurer's Office.
AA Mt. Wachusett Community College
BS Fitchburg State College, 1981

DOREEN ARES
Staff Assistant, Treasurer's Office
AA Mount Wachusett Community College.
BS Fitchburg State College, 1978

MARIANN CASTELLI HIER
Staff Assistant, Treasurer's Office
BS Fitchburg State College, 1995

SHEREE A. COLWILL
Staff Assistant, Accounting
AAS Hudson Valley Community College
BA College of St. Rose, 1997

ROY HALL, III
Director, Management Information Systems
BS Framingham State College, 1977

PATRICIA CARROLL
Staff Assistant, Programmer Analyst
BS Worcester State College
MS Fitchburg State College, 1980

RODNEY GAUDET
Staff Assistant, Technical Services
BS Fitchburg State College, 1984

JANE LEWICKE
Staff Assistant, Programmer Analyst
BS Lowell Technological Institute
MAM Worcester State College, 1984

JOHN BROMBACK
Staff Assistant, Systems Programmer
BS Fitchburg State College, 1980

SHERRY HOREANOPOULOS
Staff Assistant, User Trainer and Support Specialist
BA Montserrat College of Visual Art, 1997

JOSEPH TURNER
Staff Associate, Networking Coordinator
AS Middlesex Community College, 1997

NANCY RAMSDELL
Staff Assistant, Network Administrator, 1997

JENNIFER PORTER
Director, Financial Aid
BA Providence College, 1995

BEVERLY GUERIN
Staff Assistant, Financial Aid
AS Lasell College
BS Lasell College, 1997

NICOLE VITTORIA
Staff Assistant, Financial Aid
BA Framingham State College, 1997

PAMELA McCAFFREY
Associate Director, Financial Aid
BA Colgate University
MA Tufts University, 1997

Advancement

DANIEL S. FLYNN
Vice President for Advancement
AB Assumption College, 1978

MICHAEL V. SHANLEY
Director of Public Relations
BA Providence College, 1985

DONALD G. LIGHTFOOT
Director of Development
BA Washington and Jefferson College, 1997

LENORE J. ROBERTSON
Assistant Director of Development
BA UMass-Lowell
MS Fitchburg State College, 1995

MARY CHAPIN DURLING
Coordinator, Cultural Affairs
BA Keene State
MeD Fitchburg State College, 1995

CANDACE A. THIERRY
Director, Alumini Affairs
BA Castleton State College
EdM Harvard University, 1996

SUSAN B. SEGHIR
Researcher, Development
BA Dartmouth College, 1998

Facilities

STEVEN LANCIANI
Vice President, Facilities Management
BS Lowell Technological Institute. 1983

ARTHUR W. TRENOWETH
Director, Facilities
AA Northshore Community College
BS Salem State College. 1982

W. BRIAN McCULLOUGH
Director, Public Safety
AA Philadelphia Community College
BS Ursinus College
MSW University of Pennsylvania. 1998

JAMES HAMEL
Staff Assistant, Assistant Director of Public Safety
AA Mt. Wachusett Community College
BS Springfield College. 1974

RONALD LEBLANC
Staff Assistant, Facilities. 1985

President Emeritus

VINCENT J. MARA
President, 1976-1995
BSEd Worcester State College
EdM Worcester State College
PhD University of Connecticut

Academic Glossary and Index

Academic Glossary

Advanced Placement Credit
AP credit is given to students who score three or higher on the Advanced Placement Examinations in Biology, Advanced Placement Science A, English Composition and English Literature, English Language and Composition, any of the foreign languages, Calculus AB or BC exams, U.S. History, European History, Psychology, and American Government and Politics. Contact the Registrar for the credits assigned.

Baccalaureate
The Bachelor's Degree; traditional first step on the ladder of higher education. It is characterized by a four year program which blends courses aimed at promoting the acquisition of broad knowledge through a solid foundation in the Liberal Arts and Sciences as well as courses designed to give depth of understanding in the major field.

Carnegie Unit
The unit of work expected of students for each college credit. The college expects students to spend 45 hours of work for each credit. The most common break down for one credit is one hour of class work and two hours of homework for fifteen weeks each semester. A three-credit course demands nine hours of work each week.

CLEP
The College Level Examination Program by which up to 60 semester hours of credit may be earned towards your degree. Contact Career Services for specific details.

Credits
Arithmetic representation of the value of completed course work towards the degree requirements. One classroom hour and two hours of homework for the nominal fifteen-week semester usually counts for one credit. As the usual course responsibility requires three classroom hours per week, per semester, and six hours of work per week outside the classroom, the normal yield per course is three credits. Tradition and practice in the case of laboratory, studio, shop, and other practica awards proportional credit for hours of attendance.

Department
An administrative subdivision of the faculty. Sometimes the department is identical with a discipline category such as English or Mathematics. Departments such as Behavioral Sciences, Humanities, and Social Sciences represent an association of faculty members of related disciplines.

Electives
Those course selections by the candidate which are not predetermined by graduation, major, or minor requirements.

Liberal Arts and Sciences
Befitting the Baccalaureate tradition and current practice, the Fitchburg State College candidate is required to complete a minimum of 60 credits in a college. For details, see "Liberal Arts and Sciences Program."

Major
That structured experience in an academic field which constitutes the candidate's specialization. All degree programs require a major. As considerable variation exists as to prerequisites and total credits, the candidate must carefully study the structure of the major of her/his choice. For details of major requirements, see "Courses and Programs."

Minor
That structured experience in a related discipline/field which is recognized by the major department as supportive of the candidate's specialization. Minors are defined by the Academic Department offering them. As considerable variation in requirements exist, the candidate should study carefully the minor offerings, see "Courses and Programs."

Prerequisite
Those courses which must be satisfactorily completed before admission to certain other courses. Prerequisite courses are listed in the course description of the course requiring them. Again, see "Courses and Programs."

Program
That construct of Liberal Arts and Sciences, major, minor, and/or professional courses which satisfies the requirements for a particular degree.

Self-Help
Self-Help is in the form of loans and work.

Track
That subdivision of academic programs which constitutes a unit of professional competence. Suggestive of the complexity of identifications involved in only one department, consider the example of Business Administration. This program includes tracks in Accounting, Management, and Marketing. The candidate should clarify with his/her advisor and major department the track which he/she is interested in pursuing.

Waiver of Regulations
Recognizing the inappropriateness of rigidity in endeavors to promote its goals, the college provides for waiver procedure relative to its baccalaureate rules, regulations, and programs. All petitions for waiver of regulations begin with the Office of the Dean Curriculum and Instruction. The student should note that reasons for waiver must be as exceptional as the grant.

Index

Key

UG Disciplines offered on an undergraduate basis only

G Disciplines offered on a graduate basis only

T Programs offered as a track within a degree program

C Offered as a certificate program

M Offered only an undergraduate minor

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Fitchburg State College

"The Leadership College"

160 Pearl Street
Fitchburg, MA
01420-2697

Mr. Robert Foley
Library